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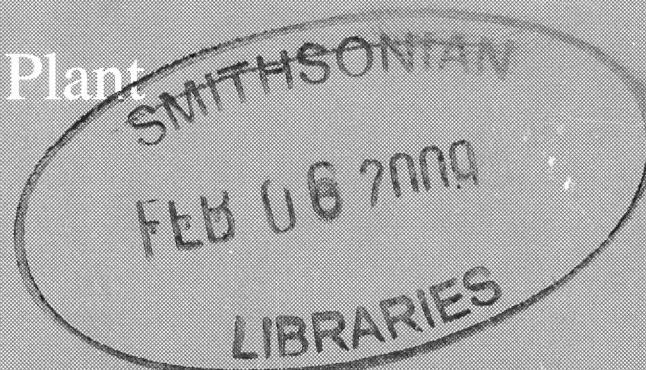
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Edited by C. W. Plant



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EDITORIAL

Welcome to volume 121 of the *Entomologist's Record and Journal of Variation*, the first to be published 'under new management'. The change in status from privately-owned to becoming a publication of the Amateur Entomologists' Society (AES) has been necessitated by rising costs and an understandable reluctance on the part of subscribers to pay a cost-effective subscription. The Editor is unchanged! I am still an unpaid 'amateur', though I am now appointed annually by the AES Council and so, at last, can be deposed if you so wish.

It is appropriate for me to mention here two colleagues who now stand down from their long-term and entirely voluntary duties. **Colin Penney** has been actively associated with the journal for no less than 23 years. He became Registrar in 1986, before becoming Treasurer at the start of 1996. **Roy McCormick** has 'officially' been our Registrar from 1986 to 2008, but prior to that period he served several years as an unofficial assistant to the Registrar, maintaining the old metal-plate 'stamping machine' used to address the envelopes. I would like to offer my personal thanks to both of them for their efforts over the years and for the assistance they have provided to make my editorial duties flow smoothly.

This first issue (only) of the 2009 volume is being supplied to all members of the AES. We hope that these people will now add it to their AES subscription options in order to receive the remaining five issues for 2009. We also hope it will encourage you all to contribute material for publication. It never ceases to amaze me that of the hundreds of trips made by dozens of entomologists in any given year, only the same five or six ever catch anything interesting! I am always happy to offer help or even 'ghost-write' Notes if necessary and potential authors should feel free to contact me (see inside front cover) for advice and assistance. It is important that all of your observations, no matter how small and apparently insignificant, are placed on record (that is what the Entomologist's **Record** exists to do). I should like to repeat a small section of the authors' introductory text to the annual review of micro moths in Britain for the year 2007, which appears in this present issue: '*... many useful records are not captured but are lost into the mass of old messages and files. A picture on the web, followed by an identification, does not count as a long-term and secure 'publication' of the record ... We ... ask very urgently that apparently interesting records are submitted to our review, or are published in a reputable national journal, so that a permanent record is secured.*' I cannot emphasise this point too strongly. The Internet is a wonderful tool, but:

- it is not a *permanent* record since web servers do sometimes crash and lose data;
- there is no control over what people put on the web so that information must necessarily be treated as *potentially* incorrect;
- it is possible to change things after the initial posting, so that referring readers to a web area as a source of a particular data set becomes impossible as that data set may have altered and so lead researchers to a different conclusion;

The written word is permanent and cannot be changed. Furthermore, if that written word is in a journal or a specialist magazine where it is subjected to scrutiny before acceptance, then the reader can be relatively certain that it is correct. If mistakes are made, corrections can be published at a later date, referring to the first article so that everyone is fully informed.

At the end of each year we produce a species index to the six issues that make up the year volume; this is compiled for us by **Catherine Wellings**, whose continuing voluntary efforts warrant a special thank you here. We also have our own web site which can be found at www.entrecord.com. Our Webmaster, **Rob Edmunds**, has created a members area which, from about February, will give subscribers access to the previous four available volumes as downloadable Adobe pdf files. Thus, 2009 subscribers will have access to the 2007, 2005, 2004 and 2003 volumes (2006 is not currently accessible). This will roll this on each year. To access this, paid-up subscribers (or authors of specific articles) will need to click on the subscribe link on the website navigation bar and follow the instructions to obtain a password. This is non-automated, so you may have to wait if Rob is busy! Please be patient – he is a volunteer too! We have also recently granted copyright permission to the Biodiversity Heritage Library at the Smithsonian Institution in Washington, USA, to digitize past issues of the journal and make these available, free, on their web site; this permission applies only to issues of the journal that are more than ten years old. Issues already uploaded can be found at <http://www.biodiversitylibrary.org/bibliography/8408>.

I hope that you will like the journal and add us to your membership options for 2009. I am always happy to be contacted informally by subscribers, potential authors and others.

Colin W. Plant

Reappearance of *Celypha rosaceana* (Schläger) (Lep.: Tortricidae) as a Scottish species after over 100 years

A specimen of *Celypha rosaceana* was taken at light during a Dumfries and Galloway Entomological Recorders Group (alias “Grey Daggers”) Field Meeting at Claymoddie, Wigtonshire (OS grid reference NX 4136, Vice-county 74) on 21/22.vii.2006. Identity was confirmed by examination of its genitalia. The only previous records of this species from Scotland are a record in 1891 of one taken ‘among the hills’ (either Perthshire or Aberdeenshire) by W. Reid (*Ent. Rec.* **2**: 111 – 112 as *Euchromia purpurana*) and a record by K. J. Morton in 1900 from the Monreith area of Wigtonshire (*Ann. Scot. Nat. Hist.* **1900**, 156-159 as *Euchromia purpurana*). The latter locality is a mere four miles away from the present reported site, suggesting that it has persisted unnoticed in its original locality for over 100 years.— KEITH P. BLAND, 35 Charterhall Road, Edinburgh EH9 3HS.

Moths new to the Isle of Wight in 2008

On 30 June 2008 I found the tortricid *Eucosma metzneriana* (Tr.) at Totland on the Isle of Wight – a new Vice-county record. Later, John Langmaid, Brian Elliott and David Biggs spent the day during 12 October 2008 on the Osborne Estate and discovered the oak-feeding leaf-miner *Stigmella svenssoni* (Johansson) (Nepticulidae) as well as *Parornix fagivora* (Frey) (Gracillariidae), associated with Beech *Fagus sylvatica*, which are both new to the Isle of Wight.

For the ‘macros’, James Halsey took the first definite example of the Jersey Mocha *Cyclophora ruficiliaria* (H.- S.) (Geometridae) at Bonchurch on 5 August whilst on 9 September at the same locality he caught a Radford’s Flame Shoulder (*Ochropleura leucogaster* (Freyer) (Noctuidae).— SAM KNILL-JONES, 1 Moorside, Moons Hill, Totland, Isle of Wight PO39 OHU.

Westward spread of the Toadflax Brocade *Calophasia lunula* (Hufn.) (Lep.: Noctuidae)

The first Middlesex record of Toadflax Brocade *Calophasia lunula* (Hufn.) was probably that at Wembley in 2002, though larvae were not found in the vice county until the following year (see Plant, 2008. *Moths of Hertfordshire*. HNHS). On 15 August 2006, Rita and Ken Merrifield found seven larvae of this species feeding on Purple Toadflax *Linaria purpurea* in their Eastcote garden. Three adults emerged between 20 February and 24 March 2007 from a number of these larvae that I was given for rearing. Rita discovered another three larvae there on 22 September 2008. On 30 September 2008, Dick Middleton recorded eight larvae using the same foodplant in his South Ruislip, Middlesex garden.

It was with great surprise that I discovered another larva of this species feeding on Purple Toadflax in my Radnage, Buckinghamshire, garden on 8 September 2008. The larva was approximately one inch long and feeding on a seedling only 2-3 inches high, although a more mature plant was growing close by. The following day, I located two more larvae in my next-door neighbour’s garden, both feeding on a plant growing out of the junction between house and footpath. These larvae were nearly full-grown, and had spun cocoons by 17 September. The smaller larva succumbed on 22 September; the two remaining larvae pupated, one died, but the other emerged successfully on 2 November. These larvae are the first records of Toadflax Brocade in Bucks. Radnage is approximately 25 miles west of Ruislip, suggesting that there could be a further westward extension of an expanding population.— A. M. GEORGE, Bayhams, Radnage Common Road, Radnage, Bucks HP14 4DD.

EDITORIAL COMMENT:

The Toadflax Brocade *Calophasia lunula* is now widely established as a breeding resident throughout much of North London from the Olympics site in the Lower Lea Valley in the east (South Essex: VC 18) to Wembley (Middlesex: VC 21) in

the west. It seems not yet (December 2008) to have spread north to Hertfordshire where the only record is from East Barnet in 2006, when Peter Alton found larvae on the Hertfordshire side of the railway cutting that marks the vice-county boundary.

Both the native yellow-flowering Toadflax and the purple-flowering garden varieties seem equally acceptable as foodplants and the distinctive larvae can be located easily, in season, on almost any scrap of derelict land in urban North London. Larvae were first noted in London by Terry Lyle at Tower Hamlets Cemetery (Middlesex) in 2003 and since that date it appears to have spread westwards and northwards. Interestingly, whilst there may be odd sightings that I am not aware of, it does not seem to have become established in London south of the River Thames. Dr George's records from Ruislip and from Buckinghamshire do indeed indicate a westwards range expansion of this species which surely ought to be looked out for over a far wider area.

If any readers visit the London area to see or collect this species, I would be grateful if they could inform me of the success or failure of their missions so that we can better document the spread of the moth.— COLIN W. PLANT, 14 West Road, Bishops Stortford, Herts CM23 3QP (Email: cpauk1@ntlworld.com).

Lights out for Glow-worms *Lampyris noctiluca* (Col.: Lampyridae)

Most Glow-worm *Lampyris noctiluca* populations in Essex are not situated near any form of artificial lighting. For example, in the 2001 Essex Glow-worm Survey, approximately 79% of glowing adult females were recorded at sites with no lighting at all (no street, house or vehicle lights) and contrastingly, only 1% of females were sighted near street lights (Gardiner et al. 2002, *Essex Nat.* **19**: 151-159). This preference for dark, unlit areas is probably due to the negative effect that artificial lighting has on mating success, flying adult males being unable to detect the female's glow in the glare of street lights, or males actually being attracted to the lights when they should be searching for females (Tyler 2002, *The Glow-worm*. Lakeside Press). The probable extinction of Glow-worms at a site near Basildon may have been attributable to the installation of nearby street lighting, as no glowing females have been seen since the lights were switched on (Mandy Greig, pers.comm.). Many reports mention in passing the negative effects artificial lighting may have on Glow-worms (e.g. Longcore and Rich 2004, *Ecol. Environ.* **2**: 191-198).

Essex County Council is currently piloting a scheme to switch off many (but not all) street lights between the hours of midnight (00.00 hours) and 5 am (05:00 hours), with the proposed benefits of the scheme being reduced CO₂ emissions and light pollution (see www.essexcc.gov.uk for more details). Currently most street lights are switched on all night in the county which is considered extremely wasteful of energy resources. The Part Night Lighting Scheme is currently being

piloted in Maldon and Uttlesford Districts, and despite early criticism by the public and media many other County Councils (e.g. Nottinghamshire) are now considering a move towards switching off street lights for part of the night.

This interesting move to reduce light pollution may have benefits for many nocturnal animals such as bats and moths. Recent analysis of counts from the Essex Glow-worm Survey suggests that most glowing females may have switched off their lights by midnight, particularly in late July and August (Gardiner 2006, *Ent. Rec.* 118: 184-185), meaning that any benefits of switching off street lights after midnight would be minimal in late summer. However, in a response to this article, Bland (2006, *Ent. Rec.* 118: 210-211) described his observations of glowing females in North Wales which were displaying in the early hours of the morning on 21 July 2006 (females switched on at approximately 01:15 hours and were still glowing at 01.30 hours when he left site). Early in the glowing season in June, females may light up much later (after 11pm) than in July and August due to the later sunset times and may therefore be glowing well after midnight. Recent observations from Essex suggest that numbers of females can be high in late June/early July (Gardiner 2007, *Coleopterist* 16: 12). This potentially means that successful early-season mating after midnight, brought about by reduced light pollution, could be important in sustaining populations of Glow-worms. It is believed that Glow-worms 'switch off' their lights permanently after mating, therefore unmated females which glow for many nights without success will be at an increased risk of predation. Ultimately there are many benefits to quick reproduction and egg-laying.

In conclusion, switching off street lights in the vicinity of Glow-worm colonies between the hours of midnight and 05.00 hours may well be beneficial to this species through increased mating success and may help to safeguard some of the existing populations threatened by nearby lighting. It may be possible to campaign for earlier switch off times near known Glow-worm populations (perhaps 11pm-5am), provided that there are no concerns over increases in crime or a decline in road safety. It will be interesting to see how the scheme progresses in Essex and other counties, but it may certainly have benefits to our nocturnal wildlife, particularly Glow-worms.— TIM GARDINER, Development, Highways and Transportation, Essex County Council, County Hall, Chelmsford, Essex, CM1 1QH (E-mail: tim.gardiner@essexcc.gov.uk).

Juniper Shieldbug *Elasmostethus tristriatus* (Fabr.) (Het.: Acanthosomatidae) in north-east Scotland

Within the UK, the Juniper Shieldbug was long thought to be virtually confined to the south of Britain. Southwood and Leston (1959. *Land and Water Bugs of the British Isles*. Warne) claim 'the upland patches of juniper in Yorkshire and the north do not usually support it and a Northumberland record requires confirmation: the sole authentic capture in the north was made at Witherslack

Wood, Lancs. [now Cumbria], in February, 1935.' More recently, Evans and Edmondson (2005. *A Photographic Guide to the Shieldbugs and Squashbugs of the British Isles*. WGUK) report the species' distribution as 'southern and midland counties of England'. However the Juniper Shieldbug has been found at several new sites in Cumbria since 1985 (Cumbria Biological Data Network website) and Harry Eales found it to be widespread in Northumberland and County Durham in 2000 (*Ent. Rec.* **113**: 13-16). In April 2007 he extended the known range by a substantial leap when he found two specimens in the Lammermuir Hills, near Edinburgh, the first to be recorded in Scotland (Eales, 2007. Shieldbug *Cyphostethus tristriatus* is in Scotland! *Het News*, issue 9, 2nd series, pp. 11-12).

On 30 March 2008, I found a single adult specimen of the species at Glen Gairn, near Ballater, Aberdeenshire (vice county 92, OS grid reference NO 339991, altitude 325 metres). This is another 139 km northwards from the Lammermuir Hills site. Subsequently I found two in a clearing at the southern end of Clashindarroch Forest on 10 May 2008 (VC 93, grid ref. NJ 422278, alt. 432 m) and two copulating, back in Glen Gairn, on 17 May 2008 (grid ref. NO 326999, alt. 351 m). On the latter date, I spent several hours searching unsuccessfully for the species in other juniper stands at Rinabaich and in the Gairnshiel Lodge area. All specimens were found by beating mature junipers *Juniperus communis* within ancient stands and all were on female (berry-bearing) bushes.

Whilst it has been suggested that cultivated juniper varieties may have helped the species to spread its range in southern England, the occurrence of this bug at isolated ancient juniper stands in Scotland is at least strongly suggestive of it being a long-unnoticed resident.— NICK A. LITTLEWOOD, Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH (Email: n.littlewood@macaulay.ac.uk).

Moths excreting meconium after flight

In response to the Editor's request for comments on the above subject (*Ent. Rec.* **120**: 204), I regularly run a Robinson trap in the garden at my home address. The egg trays inside and the walls of the trap itself are copiously spattered with meconium after a good night's catch. Several times a summer the trap requires a thorough wash to remove the build-up of deposits. Clearly it is not unusual for moths to make local flights at least while still retaining meconium.— ROY LEVERTON, Ordiquhill, Cornhill, Banffshire AB45 2HS.

EDITORIAL COMMENT

This confirmation that moths can retain meconium throughout local flights is helpful and supports evidence from my own trap in Hertfordshire. However, I still wonder if there is anyone out there who can provide positive evidence (or circumstantial evidence to the contrary) that moths can retain meconium for the duration of a migratory flight. People who catch primary immigrants as they arrive on the south coast may be able to help here?

Larvae of the Argent & Sable *Rheumaptera hastata* (L.) (Lep.: Geometridae) discovered in Northern Ireland apparently for the first time, with notes on pupation

On the afternoon of 16 August 2007 caterpillars of the Argent & Sable *Rheumaptera hastata*, a UK BAP Priority Species, were found in Northern Ireland, apparently for the first time. The larvae were found in four places over a distance of 2km, between 15.15 and 18.00 hrs, in the Ballintempo Forest area near Belcoo, Co. Fermanagh, part of this area lying within the West Fermanagh Scarplands ASSI. A total of 31 occupied larval spinnings was discovered on the terminal shoots of Bog Myrtle *Myrica gale*. We found only one small seedling of birch *Betula* spp. (a known alternative foodplant for the larvae) in the area searched, which was about 50m by 50m in extent, and could see no other birch from the site. Once we had each confirmed a couple of larvae we moved on to another area of suitable-looking habitat within the same area, so as not to disturb too many of the larger numbers of spinnings which we saw at each location and to maximise knowledge gathered on the extent of the breeding area.

Prior to this we had spent two days searching three other sites in Co. Fermanagh without success: Glenasheever ASSI, Largalinnny ASSI, and the east shore of Lough Melvin ASSI. In most cases we were following up records of occasional sightings of adults made over the last 20 years. The adult moth is rarely seen in Northern Ireland. The last time the moth was seen in the Ballintempo area was in 1998. We were surprised not to find larvae on the shore of Lough Melvin because three or four adults had been seen in this exact area at the end of June 2007, flushed from amongst Bog Myrtle. The larvae may have been at a very low population density at the time of our visit.

On most of the sites some birch was present and was also searched, but only the Bog Myrtle produced positive results. Almost all the larvae were found at mid-thigh height on the tops of the Bog Myrtle plants, amongst an open sward of tall and dense coarse grasses with some tall Heather *Calluna vulgaris* also present. Plate 1 shows some of the occupied plants and the habitat, with PW pointing to spinnings. Spinnings were not on all plants in an area, but were clumped. Plate 2 shows a plant with three spinnings on it, each occupied by a larva; these were only 10–15cm apart, and such densities of larvae were not unusual. The predominant habitat in which we found larvae was open moorland, but larvae were also discovered in intact relics of open moorland between blocks of conifer plantation, or between recently felled areas and in firebreaks. Waring (2001. Observations of the egg-laying behaviour of the Argent and Sable moth *Rheumaptera hastata* (L.) (Lep.: Geometridae). *Ent. Rec.* 113: 143-144) previously reported seeing a female Argent & Sable laying a total of five eggs in close proximity on the stump-shoots of birch – three on one leaf and two more on separate leaves only 50 cm apart.

During the survey we found Bog Myrtle leaves spun together by the larvae of several species of microlepidoptera, and by a number of species of spider. Some of the microlepidopteran spinnings were not easy to distinguish from those made

by the Argent & Sable, so it would be unwise to attribute spinnings to the Argent & Sable during surveys unless the contents had been checked and the distinctive larva found (Plate 3). With practice spinnings can be opened in a minimal way, just enough to see the larva which will hopefully reseal the spinning rather quickly so that its chance of survival is not reduced. The spinnings of spiders are generally obvious without opening, because much more silk is involved and it is whiter, rather than light-brownish.



Plate 1. Habitat of *Rheumaptera hastata* (L.) in Ireland, with PW (pointing to a larval spinning), DA and Vincent McLoughlin.

Photograph by Clive Mellon

PW and Vincent McLoughlin each collected one Argent & Sable larva to study and rear, partly to investigate the pupation habits. According to Newman & Leeds (1913. *Text Book of British Butterflies and Moths*. Gibbs & Bamforth) pupation occurs "in moss at base of tree" and this statement has been repeated in later works. It clearly refers to larvae which have been feeding on birch. When PW reared a larva of this species in 1984, from birch in Bernwood Forest, on the Oxfordshire/Buckinghamshire border, it pupated in a tight cocoon which incorporated a curled birch leaf and many pellets of larval frass which were used by the larva to make a wall between the curled edges of the leaf. This cocoon may have been made on the floor of the collecting box in which the larva was kept, or while the leaf was *in situ* on its twig in the box in which case it would have fallen to the ground in the autumn. This time VM found that his larva pupated between leaves, like the above, but mine pupated just below the surface of loose earth

without making any cocoon. I had given the larva a choice of Bog Myrtle leaves, on twigs, with dead leaf-litter below and loose earth underneath all. I searched through all of this on 8 September 2007, which was at least 12 days after the larva had finished feeding and disappeared from view, and I found the pupa perfectly formed, about 2 mm below the surface of the earth, without any trace of silk. I thought this most unusual for a larva that spends so much effort spinning up leaves throughout the feeding stage. It may be that the larvae have a range of strategies for pupation, but it seems likely from these results that over the winter pupae are not on the foodplants, but below them, whether the larvae are feeding on birch or Bog Myrtle. This has implications for habitat management and suggests that trimming or browsing of the foodplants during the winter would not remove pupae.

This survey was conducted on behalf of Allen-Mellon Environmental Ltd under contract to Environment and Heritage Service, an Agency of DOE (NI). — PAUL WARING, 1366 Lincoln Road, Werrington, Peterborough, PE4 6LS (E-mail: paul_waring@btinternet.com); DAVID ALLEN and CLIVE MELLON, Allen-Mellon Environmental Ltd., 21A Windsor Avenue, Belfast, BT9 6EE (E-mail: dave@allenmellon.com).



Plate 2. Three occupied larval spinnings, within 10-15 cm of each other. (Photo: D. Allen)

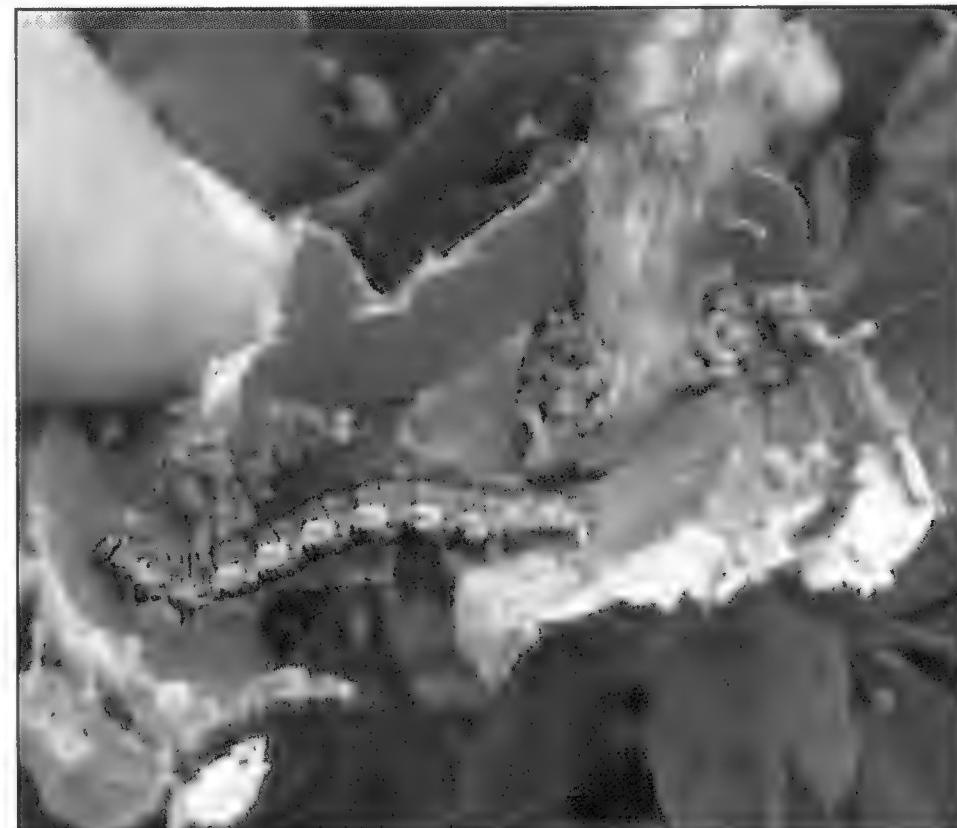


Plate 3. Final instar larva. (Photo: P. Waring)

Does *Coleophora alnifoliae* Barasch (Lep.: Coleophoridae) feed on birch (*Betula* sp.)?

The larvae of *Coleophora alnifoliae* are said to be restricted to the leaves of alder trees in Britain, with Common Alder *Alnus glutinosa* and Grey Alder *Alnus incana* both recorded. According to Hering (1957, *Bestimmungstabellen der Blattminen von Europa. 1 – 3*), birches *Betula* spp. are also utilised in Continental Europe, but in discussing this in volume 3 of the series *Moths and Butterflies of Great Britain and Ireland*, Emmet *et al* (1996) state that this tree is not used in Britain, declaring known published reports to refer to a ‘mistaken belief that the larvae of *C. milvipennis* that fed again in the spring were *C. alnifoliae*’.

It is therefore of some potential interest that on 24 July 2008 I caught several examples of *C. alnifoliae* amongst birch and sallow scrub at a post-industrial site alongside the River Thames in South Essex, just east of the Queen Elizabeth Bridge (the Dartford Crossing on the M25 motorway). The identification was made by genitalia examination.

The situation presents very strong circumstantial evidence of an association with birch. The facts relevant to this supposition are:

- Eight, apparently fresh examples of the moth were attracted to only one out of four light traps scattered about the scrub habitat. There were none in the other three traps even though all were set in broadly similar habitat and all were within 200 metres of the first. This may suggest an emergence of adult moths at a single point near one trap;
- The nearest alder appears to be a single small tree some 500 metres distant beyond two of the traps that caught no examples;
- Based on other species trapped here and elsewhere in the south of Essex, there was no apparent immigration activity on the evening in question;
- None of the moths caught gave rise to any suspicion that this recording session was held on a ‘dispersal night’.

It is, of course, entirely possible that these moths flew the 500 metres from the single small alder tree, first across open ruderal grassland and then over or through birch/sallow (*Salix* spp.) scrub to arrive in the single trap where they were all found. However, to do so they would have passed over at least one of the other three traps – and they would all have to have done it together, following the same flight line and avoiding the same alternative light sources. All this suggests that they probably originated *extremely* locally. Although this evidence is entirely circumstantial, these eight moths seem likely to have been primarily associated with the birch/sallow scrub in which the trap was set and it may be worth re-examining the supposition that *C. alnifoliae* does not affect birches in Britain?

I am grateful to Brian Goodey for double-checking and confirming my identification of *Coleophora alnifoliae* from the genitalia slides.— COLIN W. PLANT, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (E-mail: cpauk1@ntlworld.com).

Comment on the Conservation (Natural Habitats) (Amendment) Regulations 2007

As I understand it, the intention of this legislation (see *Ent. Rec.* **120**: 162-164) is to reduce the trade in endangered species. Apart from looking at e-bay, where it seems that you can get almost anything illegal, a trip to the annual Frankfurt Fair would allow you to buy any number of protected species without question, not to mention the under-the-counter opportunities that we are all familiar with at several well-known British events: Many eastern Europeans certainly make a tidy living from collecting and selling rare species – and I say this from personal experience. How, I wonder, will the legislation prevent this? Possession and trade are two completely different things – as any drugs dealer will tell you. Whilst not wishing to support any form of criminal activity, I make two observations: First, that under the present penal system the retired hippy caught smoking wacky-baccy at a party is penalised to the same level as the drugs dealer caught selling cocaine to kids outside a school gate and second, that the scum-bag outside the school gates *is not deterred* by legislation that imposes a fine on the retired hippy. *Trade* in most (all?) of the listed species in the Appendix is already illegal and so I am at a loss to understand the usefulness of potentially busting amateur entomologists for possession. We are not talking birds' eggs here – if the well-meaning idiots are working towards a blanket ban on the killing of insects we would have to ban almost every human activity. Is this the beginning of the end – or is it just paranoia induced by too many years as a retired hippy? Perhaps other readers can enlighten me through these pages?— A. NONNI-MUSS, address withheld by request.

An unusual aberration of *Mellicta* sp. probably *parthenoides* (Keferstein) (Lep.: Nymphalidae) in SW France

An unusual form of *Mellicta* species (presumed to be *M. parthenoides*) was photographed in our garden at Crémon d'Armagnac, Landes, south-west France on 29 May 2008 and again on 5 June 2008 (Plate 4). *Mellicta parthenoides* (Keferstein) had been present in the garden in large numbers since 12 May and although the very similar *Mellicta athalia* (Rottemburg) is also found in this area it has not yet been recorded at the site.

We note that this individual is similar to an aberration of *M. parthenoides* found by Mike & Brenda Marney near Gaillac in the Tarn department of south-west France in 1999 (*Ent. Rec.* **117**: 62 – 63).— CATHERINE WELLINGS AND GRAHAM WENMAN, La Bergerie, 40240 Crémon d'Armagnac, France (E-mail: gjwenman@aol.com).



Plate 4. Aberrant *Mellicta* sp. ?*parthemooides*. Crémon d'Armagnac, France, 2008.

MICROLEPIDOPTERA REVIEW OF 2007

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Abstract

Noteworthy records of microlepidoptera collected during 2007 are summarised, including five species new to the British Isles and numerous new vice-county records.

Keywords: Britain, Lepidoptera, microlepidoptera review

Introduction

2007 was an extraordinary year of contrasts, with exceptionally warm weather from January to April followed by rather average temperatures, but damagingly large amounts of rain, and little sun, from May to the autumn. There was little genuinely wintry weather in either the start or end of the season, and no record high temperatures in summer. The result was an amazing array of early emergences of early season butterflies and moths, followed by a very disappointing appearance of the usual mid-summer species and a real scarcity yet again of leaf-miners in the autumn. The contrast to the exceptionally hot and dry summer in 2006 was very marked, emphasising yet again the unpredictability of British weather and the difficulty of planning fieldwork.

Despite the poor weather the recent invaders continued their rapid spread. For example, *Ectoedemia heringella* (Mariani) reached Cambridgeshire, *Cameraria ohridella* Deschka & Dimić was recorded in Yorkshire and *Phyllocnistis ramulicola* Langmaid & Corley spread west to Wiltshire and Dorset. It frequently happens that the amazing abundance of new invaders then gives way to reduced numbers, once the invasion front has passed and there is just a little evidence that this is happening with *C. ohridella*, although it remains very plentiful.

It is true that we now know reasonably clearly where our microlepidoptera occur, and through much painstaking fieldwork we have discovered many of their larval foodplants and general habits. However, with a mere handful of exceptions, we do not understand the array of resource requirements that limit species and sometimes are implicated in their dramatic decline. Why has *Anania funebris* (Ström) become so local and scarce? Why has *Xenolechia aethiops* (Humphreys & Westwood) now almost vanished from its previous haunts? We just do not know and this seriously limits our ability to intervene to improve their status. For their survival we rely largely on either general conservation action, or more focussed work designed to benefit butterflies, for many of which we now have real understanding of their ecological needs.

It is difficult to believe that we will ever have the resources to study more than a very small number of species directly but we can watch with interest the progress of nature conservation generally and try to add in our advice and

understanding where we can. Unfortunately it is clear that, despite the frantic efforts of many very hard-working and knowledgeable conservationists, Britain's natural environment has declined inexorably in the last 50 years and, unless we change what we do, this decline seems set to continue. To try to halt this decline, there has been a recent change of emphasis in the activities of conservation agencies. 'Landscape scale' is now the buzz-word, with the focus on trying to link semi-natural habitats across large areas, so that species have the opportunity to spread along local climatic gradients and that sub-colonies that become extinct can be re-established by immigration from surviving colonies nearby. Isolated and generally small nature reserves are recognised to be inadequate for the long-term survival of most animals and plants. Let us hope that the microlepidoptera do well in the new regime.

It is very welcome that so many microlepidopterists use the internet to share their enthusiasm and to try to resolve their identification puzzles. The ability to post digital images, and get a quick diagnosis, has clearly encouraged many macro-moth enthusiasts to extend their interest towards the micros. An obvious problem is that it is often impossible to be sure of an identification based just on a picture, so that either there is the discouragement of a moth remaining unnamed or, more worryingly, of a hasty and uncertain diagnosis being adopted. In the context of this review, a further problem is that many useful records are not captured but are lost into the mass of old messages and files. A picture on the web, followed by an identification, does not count as a long-term and secure 'publication' of the record and the chance to update the distribution of the species is lost. We would like to encourage the surge in interest generated by the various moth groups, but also to ask very urgently that apparently interesting records are submitted to our review, or are published in a reputable national journal, so that a permanent record is secured.

Species new to Britain in 2007 are *Nemapogon falstriella* (Haas) found in a polytunnel in Suffolk and so of unknown origin; *Opogona omoscopa* (Meyrick) on Guernsey, originally in 2005 but more commonly in 2007; *Aethes fennicana adelaiae* (Toll) found in the catch from a Rothamsted trap in Essex, which may be a local resident or a stray from central Europe; *Bactra venosana* (Zeller) found on the south coast of Ireland and probably a migrant from the south of Europe; *Epinotia granitana* (Herrich-Schäffer) found on a tree-trunk in West Suffolk and possibly an undetected resident feeding locally on spruce; *Conogethes punctiferalis* (Guenée) found in Cornwall, as an obvious adventive species from the Far East; and *Agdistis tamaricis* (Zeller), which is resident on Jersey, extending its range west across Europe. *Phyllonorycter nigrescentella* (Logan) was recorded as new to Wales, as was *Cydia amplana* (Hübner) and *Pammene albuginana* (Guenée); *Coleophora sternipennella* (Zetterstedt), *Lobesia abscisana* (Doubleday) and *Evergestis extimalis* (Scopoli) were new to Scotland; *Cydia amplana* was new to Ireland; and *Lyonetia prunifoliella* (Hübner) was recorded for the first time since around 1900, from two vice-counties in southern England.

Although the weather in 2008 has also been rather discouraging, we have already received many new records for the next review. Please may we ask for many more, preferably in the standard format and with a national grid reference, and the easiest way to for us to receive these is as a WORD file to JRL. Thank you to so many enthusiasts, whose records make this such an extensive and important contribution, and especially to Ian Thirlwell for help with the tedious task of checking and collating the new records.

The 2007 records have come from the following recorders, each indicated in the text by his or her initials: D.J.L. Agassiz, J.S. Baker, I. Barton, H.E. Beaumont, D.T. Biggs, K.P. Bland, K.G.M. Bond, S.D.S. Bosanquet, T. Bryant, P. Clark, J. Clifton, M.F.V. Corley, P.D.M. Costen, D.W.W. Davidson, J.R. Dawson, B. Dickerson, R.J. Dickson, S. Dunlop, R.D. Edmunds, B. Elliott, C.H. Fletcher, R.G. Gaunt, B. Goodey, A.N. Graham, J.E. Graham, M.W. Harper, C. Hart, M.C. Harvey, R.J. Heckford, B.P. Henwood, J.B. Higgott, S.H. Hind, M.R. Honey, S.A. Knill-Jones, J.R. Langmaid, A.D. Lewis, N.R. Lowe, J.A. McGill, D.V. Manning, B. Neath, T.J. Norriss, E. O'Donnell, K.A. Palmer, R.M. Palmer, S.M. Palmer, M.S. Parsons, T. Pendleton, C.W. Plant, J. Porter, A.W. Prichard, K. Saul, A.N.B. Simpson, I.R. Sims, D.J. Slade, B. Smart, E.G. Smith, M.H. Smith, P.H. Sterling, N.J. Stone, T.J. Tams, I.R. Thirlwell, L.A.C. Truscott, M.J. Wall, P.M. Walsh, A.J. Wheeldon, M.R. Young. Other recorders are named in the text in full

New vice-county records are shown with the VC number both underlined and in **bold** type. Journals are abbreviated as follows: *Ent. Rec.* for *Entomologist's Record and Journal of Variation*; *Ent. Gaz.* for *Entomologists' Gazette*; *BJENH* for *British Journal of Entomology and Natural History*; and *Atropos* is named in full. RIS refers to the Rothamsted Insect Survey and VCH to Victoria County History.

SYSTEMATIC LIST

MICROPTERIGIDAE

- 3 *Micropterix aureatella* (Scop.) — Griston Bog R760233 (**H8**) 9.vi.2007 — KGMB

ERIOCRAINIIDAE

- 6 *Eriocrania subpurpurella* (Haw.) — Tramore S578014 (**H6**) 11.v.2004, det. KGMB — TB
 8 *E. unimaculella* (Zett.) — Collins Bog, Abbeyleix S436836 (**H14**) 19.iv.2007 — KGMB

NEPTICULIDAE

- 20 *Ectoedemia decentella* (H. – S.) — Sydenham, Royal Leamington Spa SP335643 (**38**) 5.ix.2007, genitalia det. — M. Kennard *per* NJS
 23 *E. argyropeza* (Zell.) — Longaller ST1925 (**5**) tenanted mines on *Populus tremula* 6.xi.2007 — JAMcG
 24 *E. turbidella* (Zell.) — E. of Molesworth Airbase TL0877 (**31**) vacated mine on *Populus canescens* 23.x.2007 — K. Royles *per* BD

- 25 *E. intimella* (Zell.) — Bryngwyn lanes SO3909 (35) 16.vi.2007 — SDSB
- 31 *E. rubivora* (Wocke) — Cliffe Woods TQ736738 (16) vacated mines on *Rubus caesius* 9.ix.2007 — DJLA & JRL
- 34 *E. occultella* (Linn.) — Water of Dye NO6590 (91) vacated mines on *Betula* sp. 12.x.2007 — MRY; Killarney National Park V922871 (H1) mines on *Betula pubescens* 23.ix.2007 — KGMB
- 35 *E. minimella* (Zett.) — Llanarmon-yn-ial SJ1857 (50) vacated mines on *Betula* sp. 15.ix.2007 — SHH
- 36a *E. heringella* (Mariani) — Osborne SZ5194 (10) many mines, mostly vacated, *Quercus ilex* 3.ii.2007 — DTB; Fareham SU5806 (11) tenanted and vacated mines on *Quercus ilex* — RJD; Fleet SU813562 (12) vacated mines on *Quercus ilex* 11.ii.2007 — RDE, Ent. Rec. 119: 202; Darland Bank TQ7865 (15) vacated mines on *Quercus ilex* 8.iv.2007 — DJLA; Ware Cemetery (20) mines on *Quercus ilex* 26.i.2007 — L. Goodyear per CWP; Jealott's Hill SU876733 (22) vacated mines on *Quercus ilex* 21.xi.2006 — IRS; The Belts, Wimpole TL342524 (29) tenanted and vacated mines on *Quercus ilex* 17.ii.2007 — IB
- 37 *E. albifasciella* (Hein.) — Killarney National Park V916883 (H1) vacated mines on *Quercus* sp. 23.ix.2007 — KGMB
- 39 *E. heringi* (Toll) — Lineover Wood SO9819 (33) mine on *Quercus* sp. 16.xi.2007 — G.H.J. Meredith per RGG
- 41 *E. atrifrontella* (Staint.) — Collinpark Wood SO7428 (34) mine in bark of young oak 2.iv.2007 — R. Homan per RGG
- 42 *Ectoedemia septembrella* (Staint.) — Cork City W663719 (H4) tenanted mines on *Hypericum* sp. 12.i.2007, moths bred; Tooreen South W632895 (H5) mines on *Hypericum* sp. 29.ix.2007 — KGMB
- 65 *Stigmella speciosa* (Frey) — Plas Tan y Bwlch SH6540 (48) vacated mines on *Acer pseudoplatanus* 25.vii.2007 — SHH per ANG; Llanrwst SH8060 (50) vacated mines on *Acer pseudoplatanus* 25.vii.2007 — SHH
- 67 *S. plagicolella* (Staint.) — Mill of Cammie NO6992 (91) vacated mines on *Prunus spinosa* 12.x.2006 — RMP & B.J. Stewart
- 70 *S. obliquella* (Hein.) — Abergavenny SO2913 (35) tenanted mine on *Salix fragilis* 12.x.2007 — JRL; Pensychnant SH7577 (49) vacated mines on *Salix fragilis* 13.x.2007 — SHH
- 72 *S. myrtillella* (Staint.) — Rough Hill Wood SP05196413 (38) tenanted mines on *Vaccinium myrtillus* 21.ix.2007 — M. Kennard per NJS
- 73 *S. trimaculella* (Haw.) — Ty Rhos, Nevern SN085376 (45) vacated mine on *Populus nigra* 14.ix.2007 — ADL
- 74 *S. assimilella* (Zell.) — Thunderfield Grove TL338053 (20) vacated mine on *Populus tremula* 23.x.2007 — M. Cooper per CWP; Collinpark Wood SO7427 (34) vacated mine on *Populus tremula* 24.viii.2007 — R. Homan per RGG
- 80 *S. ulmivora* (Fol.) — Bryn Pydew SH818787 (49) vacated mines on *Ulmus* sp. 8.vii.2007 — ANG & JEG
- 85 *S. suberivora* (Staint.) — Leckford Estate SU3737 (12) vacated mine on *Quercus ilex* 9.viii.2007 — JRL & BE; Histon TL4363 (29) mine on *Quercus ilex* 16.ii.2007 — I. Barton per JRD
- 88 *S. samiatella* (Zell.) — Clytha, SO359090 (35) vacated mine on *Castanea* 29.x.2007, det. DJS — B. Jones per DJS

- 91 *S. minusculella* (H.-S.) — Gravesend TQ643739 (**16**) mines, one with larva, on *Pyrus communis* 6.ix.2007 — JRL
- 94 *S. spinosissimae* (Waters) — Harlech SH574301 (**48**) at mv light 25.viii.2007, genitalia det. ANG — H. Bantock per ANG
- 98 *S. catharticella* (Staint.) — Caher Pier M141632 (**H26**) mine on *Rhamnus cathartica* 29.viii.2007 — KGMB
- 110 *S. betulicola* (Staint.) — Castleblagh Wood, Ballyhooley W708979 (**H5**) 2.vii.2007, genitalia det. — KGMB
- 113 *S. sakhalinella* Pupl. — Holme Fen TL1989 & TL2188 (**31**) tenanted and vacated mines on *Betula pendula* 19.x.2007, det BD — BD, T. Lawrence & K. Royles; Llangynidr SO1520 (**42**) tenanted mines on *Betula papyrifera* 2.x.2006 — JRL; Pengelli NNR SN123396 (**45**) vacated mine on *Betula pendula* 10.ix.2007, det. JRL — ADL

OPOSTEGIDAE

- 119 *Opostega salaciella* (Treits.) — Auchenshore NX8051 (**73**) v-viii.2006 — E.A.M. MacAlpine per KPB

INCURVARIIDAE

- 129 *Incurvaria pectinea* Haw. — Collins Bog, Abbeyleix S433833 (**H14**) 19.iv.2007 — KGMB
- 130 *I. masculella* ([D. & S.]) — Tramore S578014 (**H6**) 6.v.2004 — TB

PRODOXIDAE

- 136 *Lampronia corticella* (Linn.) — Cwm-gu-fawr SO2020 (**42**) larva in shoot of *Rubus idaeus* 9.iv.2007 — JRL

ADELIDAE

- 140 *Nematopogon swammerdamella* (Linn.) — Collins Bog, Abbeyleix S438835 (**H14**) 29.v.2007 — KGMB
- 151 *Adela croesella* (Scop.) — Martin's Haven SM760091 (**45**) 6.vi.2007 — JSB

HELIOZELIDAE

- 157 *Heliozela hammoniella* (Sorh.) — Portcrusha Wood W664648 (**H8**) 24.vi.2007, genitalia det. — KGMB

PSYCHIDAE

- 176 *Dahlica triquetrella* (Hübn.) — Pirbright SU9456 (**17**) cases 14.iii.2007, det. GAC/JRL, moth bred — S.G. Dodd per JP; Rushmere St Andrew TM2043 (**25**) case 1.iv.2007, moth bred — JBH
- 180 *Diplodoma laichartingella* (Goeze) — Elveden TL7980 (**26**) larval case 14.v.2007 — G. Finch per AWP

TINEIDAE

- 196 *Morophaga choragella* ([D. & S.]) — Flixton SJ741938 (**59**) 21.viii.2007 — K. McCabe per SMP
- 200 *Psychoides filicivora* (Meyr.) — Alton SU7038 (**12**) 3 & 23.vi.2007, det. BG — D.B. Owen per TJN; Hay-on-Wye SO228423 (**42**) larvae mining *Polypodium vulgare* 2.iv.2007, moths bred — JRL

- 203 *Infurcitinea argentimaculella* (Staint.) — Elveden Forest TA7980 (26) larval tube 15.v.2007, moth bred — HEB; Ufton Fields SP38275615 (38) larval tube 19.iii.2006 — M. Kennard *per* NJS; Tretower SO186212 (42) larval tubes in *Lepraria* on stone wall 4.iv.2007 — NRL & JRL
- 206 *Stenoptinea cyaneimarmorella* (Mill.) — Writtle College TL678060 (19) in RIS trap 26.vii.2006, genitalia det. — BG, *Ent. Rec.* 120: 88
- 216 *Nemapogon cloacella* (Haw.) — Tramore S578014 (H6) 15.vi.2002 — TB; Greenaun G782336 (H29) 3.vi.2007 — KGMB
- 218 *N. variatella* (Clem.) — Therfield TL3339 (20) larvae in unidentified fungus in rot hole in *Fagus sylvatica* 24.iv.2007, moths bred — BE; Henley-on-Thames, SU762842 (23) larvae in *Ganoderma adspersum* on dead tree 19.iv.2007, moths bred — IRS; Sydenham, Royal Leamington Spa SP335643 (38) 24.v.2007, genitalia det. — M. Kennard *per* NJS
- 219 *N. ruricolella* (Staint.) — Marl Hall woods SH799787 (49) to "Ves" pheromone lure 25.viii.2007, genitalia det. ANG — ANG & JEG
- 221a *N. falstriella* (Haas) — Ipswich TM2043 (25) singleton found inside polytunnel 8.viii.2007, det. MRH *et al.* — N. Sherman *per* AWP, **New to the British Isles**
- 230 *Monopis crocicapitella* (Clem.) — Tramore S578014 (H6) 19.vi.2002 — TB; Gormston O164664 (H22) 10.viii.2007, genitalia det. KGMB — EO'D
- 236 *Tineola bisselliella* (Hum.) — Hutton Conyers SE3273 (65) 11.vii.2007, genitalia det. HEB — CHF
- 240 *Tinea pellionella* Linn. — Jedburgh NT6420 (80) 22.vi.2007, genitalia det. — KPB; Tramore S578014 (H6) 13.vi.2004, genitalia det. KGMB — TB; Stamullen O146662 (H22) 10.vii.2007, genitalia det. KGMB — EO'D
- 245 *T. pallescentella* Staint. — Hutton Conyers SE3273 (65) 18.vii.2007, genitalia det. HEB — CHF
- 246 *T. semifulvella* Haw. — Castleblagh Wood, Ballyhooley W708982 (H5) 11.vii.2007 — KGMB
- 247 *T. trinotella* Thunb. — Tramore S578014 (H6) 15.vi.2003 — TB
- 277 *Oinophila v-flava* (Haw.) — Cork City W665720 (H4) 12.viii.2007, female genitalia det., first Irish record since 1866 — KGMB
- 278a *Opogona omoscopa* (Meyr.) — St Sampson, Guernsey WV332813 (113) 29.viii.2005 and four more in 2007, genitalia det. PHS — M.P. Lawlor *per* PDMC, *Ent. Gaz.* in press **New to the Channel Islands and the British list**

BUCCULATRICIDAE

- 274a *B. ulmifoliae* M.Hering — Chelsfield TQ479642 (16) vacated mines on *Ulmus* sp. 11.xi.2007 — DJLA & JRL
- 276 *B. demaryella* (Dup.) — Lissadell Woods G631454 (H28) 3.vi.2007, genitalia det. — KGMB

GRACILLARIIDAE

- 284 *Caloptilia rufipennella* (Hübn.) — Tramore S578014 (H6) 25.x.2005, det. KGMB — TB; Gormston O164664 (H22) 25.viii.2007 — EO'D
- 285 *C. azaleella* (Brants) — Totland SZ328860 (10) 11.x.2007, det. BE — SAK-J
- 288 *C. stigmatella* (Fabr.) — Kinghorn Loch NT2587 (85) larval cones on *Salix* sp. 1.ix.2007 — KPB; Auchintee NN1274 (97) larval cones on *Salix* sp. 30.viii.2007 — KPB

- 289 *C. falconipennella* (Hübn.) — Wicken Fen TL563704 (**29**) larval spinning on *Alnus glutinosa* 26.vii.2007 — JBH & JRL; Paxton Pits TL1963 (**31**) vacated spinnings on *Alnus glutinosa* 11.ix.2007 — BD; Cheltenham SO9422 (**33**) larval spinning on *Alnus glutinosa* 20.ix.2007 — R. Homan *per* RGG
- 292 *C. leucapennella* (Steph.) — Killarney National Park V916883 (**H1**) 11.x.2007, genitalia det. — KGMB
- 320 *Phyllonorycter quercifoliella* (Zell.) — Drumtochty Glen NO685795 (**91**) mines on *Quercus* sp. 12.x.2007, moths bred — MRY
- 321a *P. platani* (Staud.) — Lower Walditch SY475928 (**9**) mines on *Platanus* 28.ix.2007 — MSP & PHS; Abergavenny SO2913 (**35**) mines on *Platanus* 12.x.2007 — JRL; Museum Gardens, York SE5952 (**62**) mines on *Platanus* 21.viii.2007 — E.D. Chesmore *per* HEB; York University SE6250 (**64**) mines on *Platanus* 24.viii.2007 — E.D. Chesmore *per* HEB
- 324 *P. sorbi* (Frey) — Midloe Grange Farm TL1664 (**31**) mines on *Sorbus aucuparia* 6.x.2007 — BD; Killarney National Park V916883 (**H1**) mines on *Sorbus aucuparia* 23.ix.2007 — KGMB
- 329 *P. spinicolella* (Zell.) — Mill of Cammie NO6992 (**91**) mines on *Prunus spinosa* 12.x.2006 — RMP & B.J. Stewart
- 330 *P. cerasicolella* (H. - S.) — Brandy Hole Copse, Chichester SU8506 (**13**) mine on *Prunus cerasus* 23.x.2007 — JRL
- 332 *P. corylifoliella* (Hübn.) — Killarney National Park V916883 (**H1**) mines on *Betula pendula* 11.x.2007 — KGMB
- 332a *P. leucographella* (Zell.) — Carrog SJ1043 (**48**) mines on *Pyracantha coccinea* 2.ix.2007 — J.M. Hicks *per* ANG; Kilsheelan S332232 (**H7**) mines on *Pyracantha coccinea* 6.iii.2007; Aughinlig H871538 and Loughgall H915528 (**H37**) mines on *Pyracantha coccinea* 9.iii.2007; Belfast J346741 (**H39**) mines on *Pyracantha coccinea* 25.iii.2007 — KGMB
- 337 *P. hilarella* (Zett.) — Castleblagh Wood, Ballyhooley W708980 (**H5**) 2.v.2007 — KGMB
- 344 *P. strigulatella* (L. & Z.) — Brixton Deverill ST8638 (**8**) mines on *Alnus incana* 2.viii.2007 — JRL; Sherwood Forest Center Parcs SK6364 (**56**) mines on *Alnus incana* 29.ix.2007, moths bred — HEB
- 345 *P. rajella* (Linn.) — Tramore S578014 (**H6**) 11.vii.2005, det. KGMB — TB; Garrane R579180 (**H8**) 20.v.2007 — KGMB
- 349 *P. nigrescentella* (Logan) — Pengelli Forest NNR SN135388 (**45**) 27.iv.2007, det. ADL — J. Atkinson *per* ADL, **New to Wales**
- 353 *P. ulmifoliella* (Hübn.) — Coosane Plantation W746874 (**H5**) mines on *Betula pubescens* 16.viii.2007 — KGMB
- 360 *P. kleemannella* (Fabr.) — Maes yr Haf, Newport SN05713896 (**45**) 29.viii.2007. det. JRL from photograph — ADL
- 362 *P. acerifoliella* (Zell.) — Johnstown, Carmarthen SN399196 (**44**) mines on *Acer campestre* 23.x.2007 — JSB
- 365 *P. comparella* (Dup.) — Greywell SU7151 (**12**) mines on *Populus tremula* 11.x.2007, moths bred — RDE, TJN & P. Boswell; Knottishall Heath TL9480 (**26**) mines on *Populus canescens* 4.viii.2007 — AWP
- 366a *Cameraria ohridella* Deschk. & Dim. — Kingsteignton SX875727 (**3**) mines on *Aesculus hippocastanum* 23.vi.2007 — BPH; Cholderton SU226423 (**8**) mines

- 28.vi.2007 — PHS & JRL; Newport ST303881 (**35**) mines 23.vi.2005 — SDSB; Nettleworth Manor SK550657 (**56**) mines 9.vii.2007 — TP; Chorlton SJ805931 (**59**) tenanted mines 7.vii.2007, moths bred — BS; North Cave SE8832 (**61**) larval mines 21.vii.2007 — E.D. Chesmore *per* HEB; Museum Gardens, York SE5952 (**62**) 21.viii.2007 — E.D. Chesmore *per* HEB; Idle SE1837 (**63**) 15.viii.2007 — E.D. Chesmore *per* HEB; Harrogate SE2954 (**64**) 3.viii.2007 — E.D. Chesmore *per* HEB; Hutton Conyers SE3273 (**65**) vacated mine 10.xi.2007 — CHF
- 367 *Phylloconistis saligna* (Zell.) — Nythe ST4234 (**6**) mines on *Salix alba* 27.x.2007 — JAMcG; Ruxley Manor TQ484702 (16) mines on long-leaved *Salix* sp. 11.xi.2007, first county record since 19th C. — DJLA & JRL; Halford SP25854543 (**38**) mines in leaves and stems of *Salix fragilis* 20.x.2007 — M. Kennard *per* NJS
- 367a *P. ramulicola* Langmaid & Corley — Landford SU270192 (**8**) mines in stems of *Salix cinerea* 22.xi.2007 — B. Goater & JRL; Ferndown SU0602 (**9**) 29.xi.2007, mines in twigs and cocoons on leaves *Salix cinerea*, moth bred — PHS; Greatham SU785315 (**12**) mines and cocoons on *Salix cinerea* 21.x.2007 — JRL; Stansted Estate SU755098 (**13**) mines and cocoons on *Salix cinerea* 23.x.2007 — JRL; St Sampson, Guernsey WV318813 (**113**) mines in stems of *Salix cinerea* 28.xii.2007, det. JRL from photograph — M.P. Lawlor *per* PDMC
- 368 *P. unipunctella* (Steph.) — Llanarmon-yn-ial SJ1857 (**50**) mines on *Populus* sp. 15.ix.2007 — SHH

CHOREUTIDAE

- 388 *Prochoreutis myllerana* (Fabr.) — Lissycasey R216672 (**H9**) 26.viii.2007, genitalia det. — KGMB
- 389 *Choreutis pariana* (Cl.) — Hilperton ST873590 (**8**) 29.x.2007 — R. Beckett *per* EGS & MHS; near Stokesley NZ5310 (**62**) 2.vii.2007 — P. Waterton *per* HEB; Rawmarsh SK4396 (**63**) 12.vi.2007, conf. HEB — M. Langston *per* HEB
- 390 *C. diana* (Hübn.) — Glen Affric (96) larvae feeding on the upper surface of leaves of *Betula* sp. 2.vii.2007, moths bred — RJH

GLYPHIPTERIGIDAE

- 394 *Glyptipterix forsterella* (Fabr.) — Glashaboy South W625864 (**H5**) 17.v.2007; Glenanair East R662165 (**H8**) 10.vi.2007 — KGMB

YPONOMEUTIDAE

- 403 *Argyresthia glabratella* (Zell.) — Holmen's Grove SU9236 (**17**) larva on *Picea abies* 18.ii.2007, moth bred — JP & S.J.D. Gibson
- 409a *A. trifasciata* Staud. — East Lulworth SY8583 (**9**) 24.v.2007 — L. Hill *per* PHS; Sourhope NT8420 (**80**) v - vi.2006 a few in RIS trap, genitalia det. — RMP
- 409b *A. cupressella* Wals. — Lingfield TQ3844 (**17**) 23.v.2007, genitalia det. GAC — K.E. Noble *per* JP; Huyton SJ436902 (**59**) 15.v.2007 — S. Tomlinson *per* SMP
- 413 *A. sorbiella* (Treits.) — Gait Barrows NNR SD484776 (**60**) 6.vii.2007, det. J. Holding — B. Hugo *per* SMP
- 415 *A. retinella* Zell. — Castleblagh Wood W708979 (**H5**) 2.vii.2007; Tramore S578014 (**H6**) 5.vii.2004 — TB; Portcrusha R667649 (**H8**) 24.vi.2007 — KGMB
- 418 *A. conjugella* Zell. — Castleblagh Wood, Ballyhooley W708979 (**H5**) 11.vii.2007 — KGMB
- 424 *Yponomeuta evonymella* (Linn.) — Tramore S578014 (**H6**) 14.vii.2003 — TB

- 427 *Y. cagnagella* (Hübn.) — Tramore Burrow S616004 (**H6**) 23.vii.2003, det. KGMB — TB
- 440 *Paraswammerdamia albicapitella* (Scharf.) — Haresfield Hill SO8209 (**33**) 31.viii.2007 — R.M. Pearce *per* RGG; Stamullen O146662 (**H22**) 11.vi.2007 — EO'D
- 444 *Ocnerostoma piniariella* Zell. — Tramore S578014 (**H6**) 5.vii.2004, genitalia det. KGMB — TB
- 445 *O. friesei* Svens. — Cannock Chase SJ982166 (**39**) 22.viii.2007, genitalia det. — JC
- 448 *Atemelia torquatella* (L. & Z.) — Mergie NO7988 (**91**) larval mines on *Betula* sp. 22.viii.2007 — KPB & C.W.N.Holmes
- 449 *Prays fraxinella* (Bjerk.) — Tramore S578014 (**H6**) 27.vi.2003 — TB
- 449b *P. peregrina* Agassiz — Grain TQ8876 (16) 24.viii.2007, first record outside Greater London — F. Butcher *per* DJLA; Wimbledon TQ2570 (**17**) 10.vii.2007 — V.V. Proklov *per* JP
- 455 *Ypsolopha scabrella* (Linn.) — Tramore S578014 (**H6**) 11.viii.2002 — TB
- 462 *Y. sequella* (Cl.) — South Queensferry, NT137776 (**84**) 21.vii.2005 — DWWD; Dunfermline, NT113858 (**85**) 12.viii.2006 — DWWD
- 463 *Y. vittella* (Linn.) — Tramore S578014 (**H6**) 9.viii.2005, genitalia det. KGMB — TB
- 253 *Ochsenheimeria vacculella* F. v. R. — Stowe Park (National Trust) SP6738 (**24**) 17.vi.2007 — MCH
- 469 *Eidophasia messangiella* (F. v. R.) — Bullen Hill Farm ST894579 (**8**) 23.vi.2007 — EGS & MHS
- 473 *Acrolepiopsis assectella* (Zell.) — Torpoint SX436547 (**2**) 23.vii.2007 — LACT; Cheltenham SO9424 (**33**) larval feeding signs on *Allium* sp. 11.x.2007 — R. Homan *per* RGG

LYONETIIDAE

- 262 *Lyonetia prunifoliella* (Hübn.) — Thurlbear ST2620 (**5**) 17.viii.2007 — JAMcG; Puddletown SY7695 (**9**) 13.x.2007 — H. Wood Homer *per* PHS, **first British records since 1900**

COLEOPHORIDAE

- 490 *Coleophora lutipennella* (Zell.) — Osborne SZ5094 (**10**) case on *Quercus* sp. 21.iv.2007, moth bred — DTB
- 494a *C. prunifoliae* Doets — Sydenham, Royal Leamington Spa SP335643 (**38**) 29.vi.2007, genitalia det. — M. Kennard *per* NJS; Pleinmont, Guernsey WV240760 (**113**) case on *Prunus domestica* 19.vi.2007, moth bred, genitalia det. PHS — PDMC
- 498 *C. alnifoliae* Barasch — Holme Fen TL201890 (**31**) 11.vi.2007, genitalia det. — BD; Sydenham, Royal Leamington Spa SP335643 (**38**) 26.vi.2006, genitalia det. — M. Kennard *per* NJS
- 499 *C. limosipennella* (Dup.) — Styall Woods SJ8383 (**58**) cases on *Ulmus* sp. 4.vi.07 — B. Smart *per* SHH
- 517a *C. frischella* (Linn.) — Binley Woods, Coventry (**38**) 24.v.2007, genitalia det. — A. Prior *per* NJS
- 518 *C. mayrella* (Hübn.) — Llangynidr SO1520 (**42**) 24.v.2007 — JRL
- 522 *C. lineolea* (Haw.) — Bispham SD317394 (**60**) 8.viii.2007, genitalia det. SMP — B. Brigden *per* SMP

- 524 *C. lithargyrinella* Zell. — Jacob's Ladder NT6616 (**80**) larval case on tree trunk 23.vi.2007 — KPB
- 535 *C. ibipennella* Zell. — Sydenham, Royal Leamington Spa SP335643 (**38**) 6.vii.2007, genitalia det. — M. Kennard *per* NJS; Highfield Moss SJ6195 (**59**) cases on *Quercus* sp. 13.x.2007 — K. McCabe *per* SMP
- 541 *C. pyrrhulipennella* Zell. — Tramore S578014 (**H6**) 7.vii.2005, genitalia det. KGMB — TB
- 544 *C. albicosta* (Haw.) — Tramore S578014 (**H6**) 12.vi.2004, genitalia det. KGMB — TB
- 561 *C. therinella* Tengst. — Writtle College TL6606 (**18**) in RIS trap 15.vii.2007, genitalia det. — BG
- 564 *C. virgaureae* H. - S. — Cullen NJ5267 (**94**) 17.viii.2007, genitalia det. — MRY
- 565 *C. saxicolella* (Dup.) — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB
- 566 *C. sternipennella* (Zett.) — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB, **New to Scotland**
- 567 *C. adspersella* Ben. — Sydenham, Royal Leamington Spa SP335643 (**38**) 23.vi.2006, genitalia det. — M. Kennard *per* NJS; Marshside SD469281 (**59**) 21.vii.2007, genitalia det. — A. Barker *per* SMP; Warton Bank SD402275 (**60**) 21.vi.2007, genitalia det. — SMP
- 568 *C. versurella* Zell. — Coachford W456726 (**H4**) 28.vii.2007, genitalia det. — KGMB
- 572 *C. vestianella* (Linn.) — Pucketty Farm, Faringdon SU312989 (**22**) 3.vii.2006, genitalia det.— MFVC
- 574 *C. deviella* Zell. — Spurn TA4115 (**61**) 5.viii.2007, genitalia det. B.R. Spence, conf. HEB — B.R. Spence *per* HEB
- 580 *C. sylvaticella* Wood — Castleblagh Wood, Ballyhooley W713982 (**H5**) 2.v.2007 — KGMB
- 581 *C. taeniipennella* H.-S. — Llanarmon-yn-ial SJ1857 (**50**) cases on *Juncus articulatus* 15.ix.2007 — SHH; Lough Navar Forest H076552 (**H33**) 1.vi.2007, genitalia det. — KGMB
- 583 *C. tamesis* (Waters) — Weybridge TQ0864 (**17**) vi.2007, genitalia det. — A.R. Mitchell *per* JP; Kingsbury Water Park SP207964 (**38**) 27.vii.2007, genitalia det. — A. Prior *per* NJS
- 585 *C. maritimella* Newm. — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB
- 587 *C. caespitiella* Zell. — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB
- 589 *C. clypeiferella* Hofm. — Portsmouth SU676003 (**11**) 24.viii.2007 — IRT

ELACHISTIDAE

- 594 *Elachista gleichenella* (Fabr.) — Castleblagh Wood, Ballyhooley W708982 (**H5**) 24.v.2007; Ballyhoura Mts R638188 (**H8**) 29.vi.2007 — KGMB
- 595 *E. biatomella* (Staint.) — Skirrid Gaer SO327170 (**35**) swept from *Carex flacca* 16.vi.2007 — SDSB
- 597 *E. atricomella* Staint. — Tramore S578014 (**H6**) 30.vi.2003, genitalia det. KGMB — TB

- 598 *E. kilmunella* (Staint.) — Mawnbwll du Mawr SN810269 (44) swept from sedge 17.vi.2007, genitalia det. JSB — SDSB *per* JSB
- 599 *E. alpinella* Staint. — Ipswich TM2043 (25) 8.ix.2007 genitalia det. JC — N. Sherman *per* AWP
- 600 *E. luticomella* Zell. — Glenanair East R662165 (H8) 10.vi.2007 — KGMB
- 602 *E. apicipunctella* (Staint.) — Bullen Hill Farm ST894579 (8) 26.vii.2007 — EGS & MHS Dowdeswell Wood SO9920 (33) 8.v.2007, genitalia det. — G.H.J. Meredith *per* RGG
- 609 *E. maculicerusella* Bru. — Lissadell Woods G631454 (H28) 3.vi.2007 — KGMB
- 610 *E. argentella* (Cl.) — Cloonfonglas M702869 (H25) 4.vi.2007 — KGMB
- 611 *E. triatomea* (Haw.) — E. of Molesworth Airbase, TL0877 (31) 10.vi.2007, genitalia det. BD — K. Royles *per* BD
- 617 *E. obliquella* Staint. — Cragbank NNR NT5807 (80) larval mine on unidentified grass 23.vi.2007, moth bred — KPB
- 620 *E. gangabella* Zell. — Capel Horeb Quarry NR SN847325 (42) tenanted mines on *Brachypodium sylvaticum* 10.x.2007 — JRL, NRL & ADL
- 622 *E. adscitella* Staint — Foxglove Covert NR, Catterick SE1697 (65) 22.vi.2007, det. HEB — CHF & J.C. Warwick
- 627 *Biselachista scirpi* (Staint.) — Mochras saltmarsh SH561262 (48) tenanted mines on *Bolboschoenus maritimus* 26.iv.2007, moths bred — ANG & JEG
- 632 *Cosmiotes consortella* (Staint.) — Tramore S578014 (H6) 7.viii.2005, genitalia det. KGMB — TB

OECOPHORIDAE

- 642a *Metalampra italica* (Baldiz.) — Merrow Common TQ0449 (17) tapped from yew, 28.vii.2007 — V.V. Proklov *per* JP
- 649 *Esperia sulphurella* (Fabr.) — Barry Buddon NO5430 (90) larvae under dead bark of *Populus tremula* 3.iii.2007, moths bred — KPB; Tramore S578014 (H6) 22.v.2002 — TB
- 656 *Tachystola acroxantha* (Meyr.) — Cox Green, Maidenhead SU8779 (22) 28.iv.2007 — D.J. White *per* MCH; Far Arnside SD458763 (69) 15.v.2007 det. SMP — B Brigden *per* SMP
- 654 *Pleurota bicostella* (Clerck) — Mawnbwll du Mawr SN810269 (44) 17.vi.2007 — SDSB *per* JSB
- 658 *Carcina quercana* (Fabr.) — St Andrews Botanic Gardens NO503162 (85) 10.viii.2007 — DWWD
- 660 *Pseudatemelia josephinae* (Toll) — Maes yr Haf, Newport SN05713896 (45) 23.vi.2007 — ADL
- 666 *Semioscopis avellanella* (Hübn.) — Thrupp SO8603 (33) 13.iv.2007 — P.D.J. Hugo *per* RGG; Dornie NG886253 (105) 16.iv.2007, det. MRY — BN
- 671 *Depressaria ultimella* Staint. — Sydenham, Royal Leamington Spa SP335643 (38) 9.v.2006, genitalia det. — M. Kennard *per* NJS; Llangwnnadl SH2032 (49) 21.iv.2007, genitalia det. SHH — G. Lightfoot *per* SHH
- 674 *D. badiella* (Hübn.) — Thurlbear ST2620 (5) 21.viii.2007, genitalia det. — JAMcG; near An Doirlinn, Lismore NM8039 (98) larvae under basal leaves of *Hypochoeris radicata* 22.vi.2007, and under basal leaves of *Taraxacum officinale* agg. 25.vi.2007, moths bred — RJH

- 676 *D. pulcherrimella* Staint. — Basildon TQ663899 (18) in RIS trap 16-30.vii.2006, genitalia det. BG — CWP per BG
- 678 *D. sordidatella* Tengst. — Windmill Hill, Nuneaton SP34129350 (38) 21.vii.2007, genitalia det. — M. Kennard per NJS
- 689 *Agonopterix ciliella* (Staint.) — Auchenshore NX8051 (73) v-viii.2006 — E.A.M. MacAlpine per KPB
- 691 *A. purpurea* (Haw.) — Colesbourne SP0013 (33) 8.iv.2007 — G.H.J. Meredith per RGG; Skirrid approach track SO327165 (35) 16.vi.2007 — SDSB; Kenfig NNR SS802809 (41) indoors 19.xi.2007, first county record since 1864 — DJS
- 695 *A. alstromeriana* (Cl.) — Barry Buddon NO5432 (90) 3.iii.2007 — KPB
- 696 *A. propinquella* (Treits.) — Maes yr Haf, Newport SN05713896 (45) 27.iv.2007, genitalia det. JRL — ADL
- 697 *A. arenella* ([D. & S.]) — Tramore S578014 (H6) 14.i.2001 — TB
- 700 *A. pallorella* (Zell.) — Barton Hills NNR TL090302 (30) 11.viii.2007 — DVM
- 702 *A. assimilella* (Treits.) — Llangynidr SO143196 (42) larva on *Cytisus scoparius* 7.iv.2007 — JRL
- 705 *A. umbellana* (Fabr.) — Tramore S578014 (H6) 9.iii.2002 — TB
- 710 *A. conterminella* (Zell.) — Castle Loch LNR NY0981 (72) 19.vii.2006 — R. & B. Mearns per KPB
- 714 *A. yeatiana* (Fabr.) — Tramore S578014 (H6) 2.iv.2005, genitalia det. KGMB — TB

ETHMIIDAE

- 718 *Ethmia dodecea* (Haw.) — Ledbury SO721365 (36) 27.vii.2007 — MWH

GELECHIIDAE

- 730 *Apodia bifractella* (Dup.) — Oundle TL0389 (32) 3-9.ix.2007, genitalia det. DVM — P. Horsnail per DVM
- 731 *Eulamprotes atrella* ([D. & S.]) — Elveden TL7980 (26) 10.vii.2007 — G. Finch per AWP; Tramore S578014 (H6) 10.vii.2005, genitalia det. KGMB — TB
- 733 *E. wilkella* (Linn.) — Chesil Beach SY6775 (9) larvae in sand-hill screw-moss, *Syntrichia ruraliformis*, 9.iv.2007, moths bred — PHS (*Ent. Gaz.* in press)
- 728 *Monochroa cytisella* (Curt.) — Gait Barrows NNR SD483774 (60) 27.vii.2007 — SMP; Castleblagh Wood, Ballyhooley W708982 (H5) 11.vii.2007 — KGMB
- 736 *M. lucidella* (Steph.) — Tramore S578014 (H6) 21.vii.2005, genitalia det. KGMB — TB
- 741 *M. suffusella* (Dougl.) — Cors Nantcwnlle SSSI SN57445977 (46) 5.vi.2007 — SDSB; Astley Moss SJ7097 (59) 17.v.2007 — K. McCabe per SMP
- 779 *Bryotropha affinis* (Haw.) — Mornington O157756 (H22) 11.viii.2007 — EO'D
- 780 *B. similis* (Staint.) — Tramore S578014 (H6) 6.vii.2004, genitalia det. KGMB — TB
- 788 *B. politella* (Staint.) — Mawnbwll du Mawr SN811268 (44) 17.vi.2007, genitalia det. JSB — SDSB per JSB
- 789 *B. domestica* (Haw.) — Sharphorne TQ374325 (14) 26.viii.2007, first VC record since 1932, teste C. Pratt — PC; St Andrews Botanic Gardens NO503162 (85) 10.viii.2007 — DWWD
- 766 *Altenia scriptella* (Hübn.) — Farnham Park SU8447 (17) 12.vi.2007, det. JRL, first county record since VCH — V.V. Proklov per JP

- 768 *Carpatolechia notatella* (Hübn.) — Cornhill NJ55 (94) 10.vi.2007 — R. Leverton per MRY; Castleblagh Wood, Ballyhooley W708982 (H5) 24.v.2007, genitalia det.; Collins Bog, Abbeyleix S438835 (H14) 29.v.2007, genitalia det. — KGMB
- 770 *C. proximella* (Hübn.) — Hollow Moor SS4601 (4) larva on *Betula* sp. 3.ix.2006 — S.D. Beavan & RJH; Castleblagh Wood, Ballyhooley W708982 (H5) 24.v.2007 — KGMB
- 776 *Teleiopsis diffinis* (Haw.) — Langley Park TQ0182 (24) 3.vii.2006 — MCH
- 859 *Psoricoptera gibbosella* (Zell.) — Ryton Wood SP3872 (38) 5.ix.2007, genitalia det. A. Prior — J. Watkins per NJS
- 804 *Gelechia cuneatella* Dougl. — Kingsbury Water Park SP208964 (38) 27.vii.2007 and four more on 11.viii.2007, genitalia det. A. Prior, — K. Warminton per NJS
- 813 *Scrobipalpa salinella* Zell. — Spurn TA4115 (61) 17.vi.2007, genitalia det. HEB — B.R. Spence per HEB
- 815 *S. nitentella* (Fuchs) — Auchenshore NX8051 (73) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine per KPB; Ilaunglas M247095 (H9) 15.vii.2007, genitalia det. — KGMB
- 818 *S. atriplicella* (F. v. R.) — Tramore S578014 (H6) 17.viii.2005, genitalia det. KGMB — TB
- 819 *S. costella* (H. & W.) — Tramore S578014 (H6) 20.ix.2004 — TB
- 820 *S. artemisiella* (Treits.) — Skirrid Gaer SO327170 (35) 16.vi.2007 — SDSB
- 822 *S. acuminatella* (Sirc.) — Tramore S578014 (H6) 10.viii.2004, genitalia det. KGMB — TB
- 826 *Caryocolum vicinella* (Dougl.) — Hurlstone SS8949 (5) larva on *Silene uniflora* 1.v.2007 — JAMcG
- 827 *C. alsinella* (Zell.) — Tramore Burrow S616004 (H6) 11.vii.2005, genitalia det. KGMB — TB
- 828 *C. viscarienda* (Staint.) — Harlech SH574301 (48) 14.vii.2007, genitalia det. ANG — H. Bantock per ANG
- 831 *C. proxima* (Haw.) — Earith TL390751 (31) 25.viii.2007, genitalia det. BD — D. Griffiths per BD
- 847 *Syncopacma taeniolella* (Zell.) — Tramore S578014 (H6) 21.vii.2005, det. KGMB — TB
- 797 *Neofaculta ericetella* (Geyer) — Mongorrey C247052 (H34) 24.v.2007 — SD
- 856 *Anarsia spartiella* (Schr.) — Tramore S578014 (H6) 25.vii.2004, genitalia det. KGMB — TB
- 851 *Dichomeris alacella* (Zell.) — Holmbury St Mary TQ1143 (17) 6.vii.2007, genitalia det. P. Haynes conf. GAC, first county record since VCH — P. Haynes per JP

STATHMOPODIDAE

- 877 *Stathmopoda pedella* (Linn.) — Havannah NR NZ226718 (67) 1.vii.2007 — TJT

BATRACHEDRIDAE

- 879 *Batrachedra pinicolella* (Zell.) — Hutton Conyers SE3273 (65) 10.vii.2006, genitalia det. HEB — CHF

MOMPHIDAE

- 880 *Mompha langiella* (Hübn.) — Petty Pool SJ6170 (58) 6.x.2007 — SHH & K. McCabe

- 889 *M. divisella* H. — S. — Sydenham, Royal Leamington Spa SP335643 (38) 21.iv.2007, genitalia det. — M. Kennard *per* NJS
- 893 *M. epilobiella* ([D. & S.]) — Brownstown Head X620986 (H6) 27.iv.2007, det. KGMB — PMW

COSMOPTERIGIDAE

- 896b *Cosmopterix pulchrimella* Chambers — Portchester Castle SU624046 (11) tenanted and vacated mines on *Parietaria judaica* 4.i.2007, moths bred — IRT & JRL; Rye TQ922205 (14) vacated mines 22.iv.2007 — KAP
- 897a *Anatrachyntis badia* (Hodges) — Rushmere St Andrew TM2043 (25) at MV light 11.viii.2007, genitalia det. — JBH
- 900 *Pancalia schwarzella* (Fabr.) — Gleann Beag, Fealar NO0278 (89) 23.v.2007 — KPB
- 902 *Chrysoclista lathamella* Fletch. — Tring Sewage Works SP9213 (20) 9.vi.2007 — CWP
- 905 *Blastodacna hellerella* (Dup.) — Tramore S578014 (H6) 23.vi.2003 — TB
- 907 *Dystebenna stephensi* (Staint.) — Jealott's Hill SU876733 (22) 26.vi.2007 — IRS, *Ent. Rec.* 120: 146

SCYTHRIDIDAE

- 911 *Scythris grandipennis* (Haw.) — Bwlch Siglen SH574301 and Coed Ty-mawr, SH451121 (48) larval webs on *Ulex gallii* 15.iv.2007, moths bred — ANG & JEG
- 915 *S. picaepennis* (Haw.) — Morfa Harlech SH559339 (48) 7.vi.2007, genitalia det. ANG — ANG & JEG; near Loch Beannacharain NH2269751915 (106) larvae amongst moss and *Lotus corniculatus* and feeding on the latter 12.ix.2007 — RJH; Tramore Burrow S616004 (H6) 15.vi.2005, genitalia det. KGMB — TB
- 918 *S. limbella* (Fabr.) — Hutton Conyers SE3273 (65) 5.viii.2007, det. HEB — CHF

TORTRICIDAE

- 921 *Phtheochroa inopiana* (Haw.) — Tramore S578014 (H6) 26.vii.2005 — TB
- 924 *Hysterophora maculosana* (Haw.) — Halsey Wood SP9961 (30) 23.iv.2007 — H.A. Smith *per* DVM
- 928 *Gynnidiomorpha permixtana* ([D. & S.]) — Skehanagh R359755 (H9) 9.viii.2007 — KGMB
- 937 *Agapeta hamana* (Linn.) — Eskragh G479090 (H28) 4.vi.2007 — KGMB
- 942 *Aethes piercei* Ob. — Scar Close SD7477 (64) 7.vi.2006, conf. HEB — T.M. Whitaker *per* HEB
- 950a *A. fennicana adelaiae* (Toll) — Writtle College TL678060 (19) in RIS trap 19.viii.2006, genitalia det. — BG, *Ent. Rec.* 120: 89-90. **New to the British Isles**
- 960 *Falseuncaria ruficiliana* (Haw.) — Ballyeiragh Bridge M887037 (H10) 23.iv.2007 — KGMB; Mongorrey C247052 (H34) 24.v.2007 — SD
- 964 *Cochylis dubitana* (Hübn.) — Brownstown Head X621985 (H6) 23.vi.2006 — PMW
- 964a *C. molliculana* Zell. — Old Weston TL099774 (31) 16.vi.2007, genitalia det. — K. Royles *per* BD
- 968 *C. nana* (Haw.) — Castleblagh Wood, Ballyhooley W708982 (H5) 24.v.2007 — KGMB

- 969 *Pandemis corylana* (Fabr.) — Curraghchase R411493 (**H8**) 25.viii.2007 — KGMB
- 972 *P. heparana* ([D. & S.]) — Dromore, Drommahair G816277 (**H29**) 5.viii.2007 — KGMB
- 986 *Syndemis musculana* (Hübn.) — Mount Russell R620190 (**H8**) 20.v.2007 — KGMB
- 990 *Aphelia unitana* (Hübn.) — Tramore S578014 (**H6**) 25.vi.2003, genitalia det. KGMB — TB
- 991 *Clepsis senecionana* (Hübn.) — Griston Bog R758233 (**H8**) 5.v.2007 — KGMB
- 993 *C. spectrana* (Treits.) — Auchenshore NX8051 (**73**) v-viii.2006 — E.A.M. MacAlpine per KPB
- 998 *Epiphyas postvittana* (Walk.) — Dunfermline NT113858 (**85**) 14.viii.2004 — DWWD; Cork City W663719 (**H4**) 20.v.2007 — KGMB; Tramore S578014 (**H6**) 11.vi.2003, genitalia det. KGMB — TB; Howth O291382 (**H21**) 31.v.2007 — KGMB
- 1006 *Epagoge grotiana* (Fabr.) — Tramore S578014 (**H6**) 25.vii.2003, genitalia det. KGMB — TB
- 1007 *Capua vulgana* (Fröl.) — Tramore Burrow S616004 (**H6**) 14.vii.2004, genitalia det. KGMB — TB
- 1015 *Eulia ministrana* (Linn.) — Castleblagh Wood, Ballyhooley W708979 (**H5**) 9.vi.2007 — KGMB
- 1020 *Cnephasia stephensiana* (Doubl.) — Tramore S578014 (**H6**) 12.vii.2004, genitalia det. KGMB — TB
- 1021 *C. asseclana* ([D. & S.]) — Tramore S578014 (**H6**) 13.vii.2004, genitalia det. KGMB — TB
- 1022 *C. pasiuana* (Hübn.) — Llangynidr SO1520 (**42**) 29.vi.2007, genitalia det. — JRL
- 1023 *C. genitalana* (P.& M.) — Brassey NR SP1322 (**33**) 4.viii.2007, genitalia det. — G.H.J. Meredith per RGG
- 1024 *C. incertana* (Treits.) — Loch Fiart, Lismore NM8037 (**98**) 26.vi.2007 — RJH
- 1030 *Eana incanana* (Steph.) — Talybont SH589220 (**48**) 15.vii.2007, genitalia det. ANG — J.M. Hicks per ANG
- 1034 *Spatialistis bifasciana* (Hübn.) — Budshead Wood SX4659 (3) 17 & 18.xi.2007 12 larvae; Chudleigh Knighton Heath SX8377 (3) 24.xi.2007 several larvae; Hembury Woods SX7367, SX7267, SX7268 (3) 25.xi.2007 several larvae; Warleigh Wood SX4460 & SX4560 (3) 1.xii.2007 two larvae; Denham Wood SX4767 2.xii.2007 several larvae; Lady's Wood SX6859 (3) 9.xii.2007 two larvae; Plymbridge Woods SX5458 (3) 16.xii.2007 three larvae; Stowford SY0586 (3) 25.xii.2007 one larva; Newbridge SX7070 (3) 29.xii.2007 one larva. All larvae in folded edges of dead leaves of *Quercus* sp., and, with two exceptions, all the leaves were on twigs caught in the understorey and most, if not all, of the leaves were affected by the microfungus *Ciborinia candolleana* (Lév.) Whetzel. Moths reared. These records suggest that contrary to the British literature prior to 2006 (when M. S. Parsons reared the species from larvae in dead *Castanea sativa* leaves and RJH reared it from a case on the ground) the larva does not feed in berries — RJH
- 1036 *Acleris forsskaleana* (Linn.) — Dunfermline NT113858 (**85**) 9.viii.2004 — DWWD
- 1048 *A. variegana* ([D. & S.]) — Druim Mor, Lismore NM7936 (**98**) larvae in spun leaves of *Dryas octopetala* 24.vi.2007, moths bred — RJH
- 1055 *A. hyemana* (Haw.) — Wigpool SO6519 (**34**) 26.ix.2007 — C. Twissell per RGG; Rahan R631980 (**H5**) 14.iv.2007 — KGMB

- 1064 *Celypha rosaceana* (Schläg.) — Claymoddie NX4136 (74) 21/22.vii.2006, first county record for 100 years — R. & B. Mearns *per* KPB
- 1079 *Piniphila bifasciana* (Haw.) — Ellington Banks MoD SE2773 (**64**) 24.viii.2007, genitalia det — CHF
- 1087 *Orthotaenia undulana* ([D. & S.]) — Tramore S578014 (**H6**) 28.vi.2003, genitalia det. KGMB — TB
- 1089 *Apotomis semifasciana* (Haw.) — Tramore S578014 (**H6**) 16.vii.2005 — TB
- 1092 *A. turbidana* (Hübn.) — Castleblagh Wood, Ballyhooley W708979 (**H5**) 9.vi.2007 — KGMB
- 1104 *Endothenia quadrimaculana* (Haw.) — Tramore S578014 (**H6**) 20.vi.2003 — TB
- 1108 *Lobesia abscisana* (Doubl.) — St Cyrus NNR NO7463 (**91**) 11.viii.2007 — MRY, **New to Scotland**
- 1109 *L. littoralis* (H. & W.) — near An Doirlinn, Lismore NM8039 (**98**) 22.vi.2007 — RJH
- 1110 *Bactra furfurana* (Haw.) — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB
- 1111a *B. lacteana* Caradja — near An Doirlinn, Lismore NM8039 (**98**) 25.vi.2007, genitalia det. second Scottish record — RJH
- 1112 *B. robustana* (Christ.) — Auchenshore NX8051 (**73**) v-viii.2006, genitalia det. KPB — E.A.M. MacAlpine *per* KPB
- 1112a *B. venosana* (Zell.) — Tramore S578014 (**H6**) 22.ix.2006, conf. and genitalia det. KGMB — TB, *Ent. Rec.* **120**: 97-99, **New to the British Isles**,
- 1128 *Ancylis myrtillana* (Treits.) — Griston Bog R758233 (**H8**) 5.v.2007 — KGMB
- 1130 *Epinotia pygmaeana* (Hübn.) — Garn Boduan SH3139 (**49**) 27.iv.2007, genitalia det. SHH — G. Lightfoot *per* SHH
- 1132 *E. subocellana* (Don.) — Garryarthur R712163 (**H8**) 5.v.2007 — KGMB
- 1142 *E. tedella* (Cl.) — Greenaun G782333 (**H29**) 3.vi.2007 — KGMB
- 1144a *E. granitana* (H – S.) — Elveden Forest TL7980 (**26**) 15.v.2007 — HEB, *Ent. Gaz.* **58**: 268-270, **New to the British Isles**
- 1147 *E. cruciana* (Linn.) — Castleblagh Wood, Ballyhooley W708979 (**H5**) 9.vi.2007 — KGMB
- 1157 *Crocidosema plebejana* Zell. — Bullen Hill Farm ST894579 (**8**) 3.viii.2006 — EGS & MHS; Maes yr Haf, Newport SN05713896 (**45**) 26.x.2007 — ADL; Tramore S578014 (**H6**) 5.xi.2003 — TB
- 1162 *Rhopobota myrtillana* (H. & W.) — Griston Bog R758233 (**H8**) 9.vi.2007 — KGMB
- 1171 *Gypsonoma minutana* (Hübn.) — Old Basing SU6653 (**12**) 22.vii.2006, det. M.J. Wall — J.K. Andrews *per* TJN; Ladywalk SP2191 (**38**) 3.viii.2007, genitalia det. A. Prior — J. Bates *per* NJS
- 1176 *Epiblema trimaculana* (Haw.) — Dunfermline NT113858 (**85**) 30.vii.2004 — DWWD
- 1179 *E. incarnatana* (Hübn.) — Tramore Burrow S616004 (**H6**) 9.vii.2005 — TB
- 1182 *E. turbidana* (Treits.) — Pontnewydd SN437073 (**44**) swept from *Petasites hybridus* 8.vi.2007 — JSB
- 1184a *E. cirsiana* (Zell.) — Trawscoed SH846328 (**48**) 26.vi.2007 — ANG & JEG

AES AGM and Members' Day – 2009

"Evolution and the insect world"

Saturday, 18th April, 2009

Department of Zoology, University of Cambridge
Downing Street, Cambridge, CB2 3EJ

Doors open 11:00 a.m. for a 12:00 noon start



PROGRAMME

The opening address at this year's Members' Day will be delivered by **Professor David Bellamy**. A detailed programme will be provided on the day, and will include talks by Bug Club members **Samuel Baylis** and **Luke Andrews**. Talks will also be given by the Curator of the Cambridge Zoology Museum, **Dr William Foster**, and by **Cambridge entomologists** from the Departments of Zoology and Genetics.

In-between the talks there will be separate **tours of the Zoology Museum and the Insect Rooms**.

Foyer displays will include:

- Displays • AES Posters • Entomology at Cambridge
Member exhibits & live insects

Affiliates

- Royal Entomological Society • Quekett Microscopical Club
Conchological Society of Great Britain and Ireland

Light refreshments

Sandwiches, wine and soft drinks will be available

HOW TO GET THERE

The Museum is situated in Central Cambridge, on the University New Museum site.

You can enter the Museum through the archway on Downing Street opposite Tennis Court Road.

You will notice the Finback Whale skeleton above the entrance.

By Rail: There are services to Cambridge from King's Cross and Liverpool Street railway stations in London. There are one or two trains each hour from both stations, the faster of which takes just under an hour. Cambridge railway station is about 1 mile from the Department. Buses run regularly from the railway station to the centre of town.

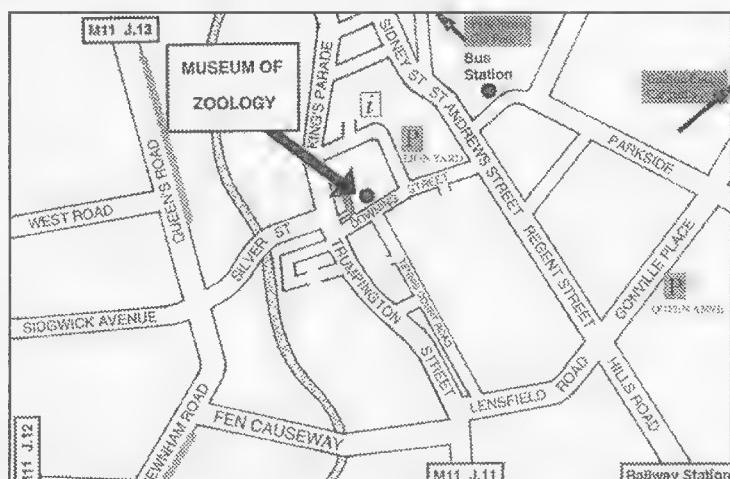
By Coach: Hourly services from London (Victoria) to Cambridge, arriving on Parkside, are provided by National Express (telephone: 08705 80 80 80). There are also services from Heathrow and Gatwick airports.

By Road: Cambridge is well served by several major roads, the M11, the A1(M) and the A14 making it easily accessible from all parts of the UK.

The simplest way into Cambridge is to join the M11: Leave the M11 at junction 12 and turn right onto Barton Road, following it to the City Centre. Turn right at first roundabout (Shell garage) where Barton Road meets Fen Causeway. Turn left onto Trumpington Street at the mini-roundabout, and continue past the Fitzwilliam Museum on your left. Turn right into Pembroke Street, which becomes Downing Street. The Zoology Department is on the left just before the junction with Corn Exchange Street and the Crowne Plaza Hotel.

Car Parking: There is no parking available on the New Museums Site where Zoology is located, but you can park in the Lion Yard car park adjacent to Zoology in Corn Exchange Street. If this is full, follow signs for St. Anne's Terrace car park, about half a kilometre away. Short term Pay and Display parking is available on streets. The car parks at the Grafton Centre and Park Street are both fairly central.

There is an excellent park and ride scheme located on the main routes into the city centre. See the Cambridge City Council website (www.cambridge.gov.uk/services/carparks.htm) for more details on locations and rates.



More detailed location and travel information is provided on the Zoology Department website:
www.zoo.cam.ac.uk/zooone/department/map.html

AES Publications

Amateur Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

£ 11.45

Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988) £ 3.10

Members price £ 2.35

A Coleopterist's Handbook

Edited by J.Cooter & M.V.L.Barclay The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

£ 54.00

Members price £ 39.00

Host plants of British Beetles: A List of Recorded Associations

A list of a wide range of plants, in alphabetical order, together with the beetle species that have been recorded as being associated with them. 24 pages (1992) £ 3.10

Members price £ 2.35

A Silkmoth Rearer's Handbook by B.O.C. Gardiner

SPECIAL OFFER PRICE £ 7.70

No further discounted price available

A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996)

£ 14.20

Members price £ 10.60

Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980)

£ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003)

£ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982)

£ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001)

£ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and describe them. 422 pages. Hardback. (Reprinted 1994).

£ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996)

£ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999)

£ 18.90

Members price £ 14.10

Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition – 2001)

£ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003)

£ 7.40

Members price £ 5.45

The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival.

£ 11.90

Members price £ 8.90

Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951)

£ 1.05

Members price £ 0.90

A Label List of European Butterflies

20 pages. (Revised 1981)

£ 2.35

Members price £ 1.85

Some British Moths Reviewed

Aid to the identification of some of the more difficult species. Reprinted from the *Amateur Entomologist* Vol. 5 (1941) and a *Guide to the Critical Species of Lepidoptera*, reprinted from *Entomologists' Gazette* 1969-72. 64 pages, 6 black and white plates, numerous figures (1985)

£ 4.45

Members price £ 3.35

Butterflies of Cyprus 1998 (Records of a years sightings) by Eddie John Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000)

£ 4.30

Members price £ 3.25

Collecting Het.Bugs (Hemiptera: Heteroptera)

12 pages (including 2 plates). (1946)

£ 1.20

Members price £ 1.00

£ 1.20

Members price £ 1.00

£ 1.10

Collecting Clearwings

12 pages (including 2 plates), 4 figures. (1946)

£ 1.10

Members price £ 1.00

Collecting Lacewings

9 pages, 8 figures, 5 plates. (2nd edition 1976)

£ 2.25

Members price £ 1.75

£ 2.25

Members price £ 1.75

£ 2.25

An Amateur's Guide to the Study of the Genitalia of Lepidoptera

16 pages, 15 figures. (1973)

£ 3.10

Members price £ 2.35

£ 2.55

£ 2.55

Members price £ 2.00

£ 2.55



AES Membership Rates 2009

Membership of the Society runs from 1st January to 31st December each year. New members will receive all publications published during the year of enrolment subject to availability, except for those joining on or after 1st October.

Members joining on or after 1st October will be deemed to have joined for the following year unless a specific request for membership of the current year is made. In such cases, the publications already published that year will be sent with the enrolment confirmation letter and the remaining ones received as they are published. A further membership subscription will be necessary for the following year.

If you have any queries about membership please contact us via the website, www.amentsoc.org or PO Box 8774, London SW7 5ZG

Individual Adult Membership

Membership sub-category	UK	Overseas
Bulletin only	£20.00	£25.00
Entomologist's Record only	£25.00	£30.00
Bug Club Magazine only	£20.00	£25.00

Individual Bug Club / Junior Membership

Membership sub-category	UK	Overseas
Junior under-18 (Bug Club Magazine only)	£12.00	£17.00
Junior aged 13-17 (Bulletin only)	£12.00	£17.00

Family or Combined Membership

Membership sub-category	UK	Overseas
Bulletin & Entomologist's Record	£40.00	£45.00
Bulletin & Bug Club Magazine	£28.00	£33.00
Entomologist's Record & Bug Club Magazine	£35.00	£40.00
Bulletin, Entomologist's Record & Bug Club Magazine	£48.00	£53.00

Associate / Institutional Membership

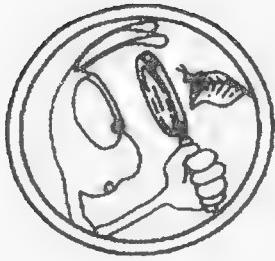
Membership sub-category	UK	Overseas
Bulletin only	£20.00	£25.00
Entomologist's Record only	£50.00	£55.00
Bug Club Magazine only	£20.00	£25.00
Bulletin & Entomologist's Record	£65.00	£70.00
Bulletin & Bug Club Magazine	£28.00	£33.00
Entomologist's Record & Bug Club Magazine	£65.00	£70.00
Bulletin, Entomologist's Record & Bug Club Magazine	£75.00	£80.00

The Amateur Entomologists' Society

PO Box 8774, London SW7 5ZG

www.amentsoc.org

If you have any problem working out your subscription please email the Registrar at registrar@amentsoc.org for advice.



AES Events Calendar 2009



Please see the AES website for full and up to date listings of AES and other events.
All AES events are free to members and their guests.

Saturday 21st February:

Oxford University Museum of Natural History

Parks Road, Oxford OX1 3PW. 11:00 – 4:00.

'How to make an insect collection'

This will involve a talk by museum staff followed by practical work.

Specimens will be provided or you can bring your own specimens (of any invertebrate order) and the Museum staff will help you prepare and mount them and advise on curation.

It would help if you could please let the AES secretary know if you plan to attend.

Saturday 18th April:

AES Members' Day & AGM

Department of Zoology, University of Cambridge.

For more details please see next page.

Saturday 23rd May:

Visit to Horniman Museum and Gardens, London.

Full details will follow in the next issue of the Record.

Saturday 27th June:

Horsenden Hill, Perivale, Middlesex.

Meet at Horsenden Farm (TQ163840) 10.00 a.m.

A butterfly walk on Horsenden Hill including to see the White-letter hairstreak, and examination of moth trap contents from the previous night. Leaders: Andy Culshaw & David Howdon.

Contact: David Howdon (davidhowdon@yahoo.co.uk), 020 8426 6621

This is a joint event with Butterfly Conservation and the London Natural History Society. **Please note that due to expected high numbers this event is restricted to AES members and our partner organisations only.**

August events: (dates to be confirmed)

AES & Bug Club visit to the World Museum Liverpool

William Brown Street, Liverpool, L3 8EN. 11:00 - 4:00

This visit will involve a tour of the museum's extensive insect collections and a guided visit to the Bughouse and the Clore Natural History Centre. This AES event is also open to members of local entomological and natural history societies and their guests.

Osterley Park BioBlitz

This will involve a survey of ancient grassland and woodland at Osterley Park.

September:

Oxford University Museum of Natural History

Parks Road, Oxford OX1 3PW. 11:00 – 4:00.

Bug Club event. Full details will follow closer to the time.

Saturday 17th October:

Annual Exhibition & Insect Fair, Kempton Park Middlesex

The UK's premier entomological fair.

- 1197 *Eucosma campoliliana* ([D. & S.]) — Tramore S578014 (**H6**) 9.vii.2005 — TB
- 1200 *E. hohenwartiana* ([D. & S.]) — Tramore S578014 (**H6**) 1.viii.2004, genitalia det. KGMB — TB
- 1205 *Spilonota ocellana* ([D. & S.]) Tramore S578014 (**H6**) 14.vii.2003 — TB
- 1205a *S. laricana* (Hein.) — Tramore S578014 (**H6**) 10.vii.2005, genitalia det. KGMB — TB
- 1208 *Pseudococcyx posticana* (Zett.) — Queen's Wood, Kempley SO681285 (**36**) 11.v.2007 — J. Rush *per* MWH
- 1215 *Thaumatotibia leucotreta* (Meyr.) — Darlington NZ261163 (**66**) indoors 19.viii.2007 — AJW
- 1216 *Enarmonia formosana* (Scop.) — Tramore S578014 (**H6**) 13.vi.2004 — TB
- 1226 *Pammene agnotana* Rebel — Chedington Wood ST4806 (**9**) 26.iv.2007, genitalia det. PHS — P.N. Butter & P.A. Davey *per* PHS
- 1229 *P. albuginana* (Guen.) — Trawscoed SH848321 (**48**) 15.vi.2007, genitalia det. ANG — ANG & JEG, **New to Wales**
- 1234 *P. regiana* (Zell.) — Tramore S578014 (**H6**) 5.vii.2003 — TB
- 1235 *P. trauniana* ([D. & S.]) — Mill Rough SO919482 (**37**) 26.v.2007, det. ANBS from photograph — K. McGee *per* ANBS
- 1236 *P. fasciana* (Linn.) — Tramore S578014 (**H6**) 30.vi.2003, genitalia det. KGMB — TB
- 1239 *P. rhediella* (Cl.) — Tramore S578014 (**H6**) 17.v.2005 — TB
- 1271 *P. gallicana* (Guen.) — Tramore Burrow S616004 (**H6**) 2.viii.2005, genitalia det. KGMB — TB
- 1240 *Grapholita caecana* (Schläger) — Puddletown SY7695 (**9**) 7.vi.2007 — H. Wood Homer *per* PHS
- 1247 *G. funebrana* (Treits.) — Harlech SH574301 (**48**) 4.vii.2007, genitalia det. ANG — H. Bantock *per* ANG; Hutton SD494265 (**59**) 3.viii.2007 genitalia det. SMP — A. Barker *per* SMP; Dolphinholme SD529525 (**60**) 10.vi.2007 genitalia det. — N. Rogers *per* SMP; Tramore S578014 (**H6**) 20.vii.2005, genitalia det. KGMB — TB
- 1255a *Cydia medicaginis* (Kuzn.) — Rotherhithe TQ3679 (**17**) 15.vii.2007 — JP, V.V. Proklov & S.J.D. Gibson
- 1260 *C. splendana* (Hübn.) — Monymusk NJ669191 (**92**) 5.ix.2007 in RIS trap — RMP; Tresta HU358516 (**112**) 2.x.2007, det. JC — J. Mackenzie *per* JC; Tramore S578014 (**H6**) 29.vii.2003 — TB
- 1262 *C. amplana* (Hübn.) — Risca ST234095 (**35**) 12.viii.2005 — M.E. Anthoney *per* SDSB; Glasbury (**43**) 12.viii.2005, det. NRL — P. & V. Clarke *per* AMD, **New to Wales**; Tramore S578014 (**H6**) 4.viii.2004, genitalia det. KGMB — TB, **New to Ireland**
- 1266 *C. pactolana* (Zell.) — Tugley Wood SU9833 (**17**), tapped from spruce 23.v.2007, first confirmed county record — JP & V.V. Proklov
- 1266a *C. illutana* (H. – S.) — Piddles Wood ST7912 (**9**) 25.v.2007, genitalia det. PHS — P.N. Butter & P.A. Davey *per* PHS; Pitsford Water NR SP7870 (**32**) 11.vi.2007, genitalia det. DVM — P. Horsnail *per* DVM; Moccas CP SO33264246 (**36**) 10.vi.2007, genitalia det. JC — D. Grundy *per* JC

- 1269 *C. conicolana* (Hael.) — Sydenham, Royal Leamington Spa SP335643 (38) 7.vi.2006, genitalia det. — M. Kennard *per* NJS
- 1274 *Dichrorampha alpinana* (Treits.) — Tramore S578014 (H6) 26.vii.2004, genitalia det. KGMB — TB
- 1280 *D. consortana* Steph. — Malpass Quarry, Rugby SP48917611 (38) 16.vi.2007, genitalia det. — M. Kennard *per* NJS
- 1285 *D. plumbana* (Scop.) — Brownstown Head X619281 (H6) 5.vi.2006, genitalia det. KGMB — PMW

EPMENIIDAE

- 481 *Epermenia falciformis* (Haw.) — Spurn TA4115 (61) 13.ix.2007 — B.R. Spence *per* HEB
- 483 *E. chaerophyllella* (Goeze) — Tramore S578014 (H6) 12.vii.2004, genitalia det. KGMB — TB

PYRALIDAE

- 1292 *Calamotropha paludella* (Hübn.) — Rawcliffe Meadows SE5754 (62) 25.vii.2007, det. HEB — CHF, J.C. Warwick & S.P. Warwick
- 1293 *Chrysoteuchia culmella* (Linn.) — Cloonfinglas M702869 (H25) 4.vi.2007 — KGMB
- 1297 *Crambus uliginosellus* Zell. — near An Doirlinn, Lismore NM8039 (98) 22 & 25.vi.2007 not uncommon in two areas with *Eriophorum* sp. — RJH
- 1302 *C. perlella* (Scop.) — Portstewart Dunes C80336 (H40) 3.viii.2007 — KGMB
- 1313 *Catoptria pinella* (Linn.) — Tramore S578014 (H6) 14.vii.2004 — TB
- 1314 *C. margaritella* ([D. & S.]) — Dursley ST7597 (34) 5.viii.2007 — P. Cranswick *per* RGG
- 1326 *Platytes cerussella* ([D. & S.]) — Basingstoke SU637544 (12) 22.vi.2007 — MJW
- 1330 *Donacaaula mucronellus* ([D. & S.]) — Tramore S578014 (H6) 20.vii.2005 — TB
- 1336 *Eudonia pallida* (Curt.) — Kylenahoory W709985 (H5) 12.vii.2007 — KGMB
- 1340 *E. truncicolella* (Staint.) — Ardnasillagh M166420 (H16) 28.viii.2007; Kilkeeran M16472 (H26) 6.viii.2007 — KGMB
- 1345 *Elophila nymphaeata* (Linn.) — Loch Fiart, Lismore NM8037 (98) 23.vi.2007 — RJH
- 1354 *Cataclysta lemnata* (Linn.) — Belle Lake S664045 (H6) 6.viii.2007 — PMW
- 1357 *Evergestis extimalis* (Scop.) — Eswick HU488538 (112) 9.viii.2007, det. JC — T. Rogers *per* JC, New to Scotland
- 1360 *Hellula undalis* (Fabr.) — Crawley SU4431 (12) 12.x.2006 — R.A. Bell *per* TJN
- 1370 *Sitochroa palealis* ([D. & S.]) — Downderry SX3154 (2) 11.vii.2007 — J.C. Nicholls *per* LACT
- 1375 *Ostrinia nubilalis* (Hübn.) — Tramore S578014 (H6) 14.vii.2003, genitalia det. KGMB — TB
- 1384 *Phlyctaenia stachydalis* (Germ.) — Ochrwyth ST2489 (35) 8.vi.2007, conf. SDSB from photograph — R. Clarke *per* SDSB
- 1397 *Mecyna asinalis* (Hübn.) — Tramore S578014 (H6) 6.vii.2002 — TB
- 1397a *Diplopseustis perieresalis* (Walk.) — Exeter (3) 5.xi.2007 — G. & J. Jarvis, *Bulletin of the Amateur Entomologists' Society* 67: 54-55

- 1400 *Antigastra catalaunalis* (Dup.) — Tramore S578014 (**H6**) 24.ix.2006 — TB
- 1408 *Palpita vitrealis* (Rossi) — Spurn TA4115 (**61**) 1.viii.2007 — B.R. Spence *per* HEB; Connansknowe NX9782 (**72**) 22/23.ix.2006 — R. & B. Mearns *per* KPB; Tramore S578014 (**H6**) 25.ix.2003 — TB
- 1412a *Conogethes punctiferalis* (Guen.) — Torpoint SX4354 (**2**) 23.vi.2007, det M. Shaffer & MRH — LACT, *Ent. Gaz.* **58**: 203-204, **Adventive species new to the British Isles**
- 1413 *Hypsopygia costalis* (Fabr.) — Achnanacloich NM955337 (**98**) 28.vi.2007, det MSP — A. Anderson *per* MSP
- 1424 *Endotricha flammealis* ([D. & S.]) — St Annes SD337298 (**60**) 11.viii.2007 — J. Steeden *per* SMP
- 1439 *Trachycera advenella* (Zinc.) — Dunfermline NT113858 (**85**) 30.vii.2004 — DWWD; Ballyconnell G567452 (**H28**) 5.viii.2007 — KGMB
- 1445 *P. formosa* (Haw.) — Dingestow SO4509 (**35**) 9.vi.2007 — SDSB
- 1454 *Dioryctria abietella* ([D. & S.]) — Gortigrenane W757572 (**H4**) 1.x.2007 — KGMB
- 1458 *Myelois circumvoluta* (Geoffr.) — Connansknowe NX9782 (**72**) 16.vi.2006 — R. & B. Mearns *per* KPB; Brownstown Head X620986 (**H6**) 5.vi.2007 — PMW
- 1461 *Assara terebrella* (Zinck.) — Elveden TL7980 (**26**) 9.vii.2007 — G. Finch *per* AWP; Huntsfield Farm, Eyemore Wood SO774966 (**37**) 23.vi.2007 — ANBS & R. Winnall
- 1462 *Pempeliella dilutella* ([D. & S.]) — Tramore Burrow S616004 (**H6**) 27.viii.2002 — TB
- 1465 *Nephopterix angustella* (Hübn.) — Hillmorton, Rugby SP539739 (**38**) 22.v.2007 — M. Nicholas *per* NJS
- 1467 *Ancylosis oblitella* (Zell.) — Tramore S578014 (**H6**) 24.ix.2006 — TB
- 1478b *Vitula biviella* (Zell.) — Barnet TQ2596 (**21**) 12.vii.2007, genitalia det. — R. Terry *per* CWP
- 1479 *Plodia interpunctella* (Hübn.) — Penclacwydd SS532985 (**44**) indoors 16.ix.2007 — B. & S. Stewart *per* JSB; Portsoy NJ5866 (**94**) infestation in a sack of animal feed 4.iv.2007 — P. Johnston *per* R. Leverton
- 1480 *Homoeosoma nebulella* ([D. & S.]) — Tramore S578014 (**H6**) 31.viii.2005, genitalia det. KGMB — TB; Stamullen O146662 (**H22**) 20.vii.2007 — EO'D
- 1483 *Phycitodes binaevella* (Hübn.) — Tramore S578014 (**H6**) 21.vii.2002, genitalia det. KGMB — TB

PTEROPHORIDAE

- 1488a *Agdistis tamaricis* (Zell.) — La Mielle de Morville, Jersey WV565496 (**113**) larvae on *Tamarix gallica* 22.viii.2007, moths bred — M. Hammond *per* CH, *Atropos* **34**: 38-40, **New to the Channel Islands and the British list**
- 1497 *Amblyptilia acanthadactyla* (Hübn.) — Tramore S578014 (**H6**) 9.xi.2003, genitalia det. KGMB — TB
- 1508 *Stenoptilia bipunctidactyla* (Scop.) — near Port Chaltuinn, Lismore NM8039 (**98**) 22.vi.2007 — RJH
- 1510 *Merrifieldia leucodactyla* ([D. & S.]) — Loch Fiart, Lismore NM8037 (**98**) 23.vi.2007, genitalia det. — RJH
- 1523 *Oidaematophorus lithodactyla* (Treits.) — Killoteran S555114 (**H6**) 23.viii.2007 — KGMB

**CORRECTIONS
to the 2006 Review**

- 36a *Ectoedemia heringella* (Mariani) — delete *Quercus cerris* and substitute *Quercus x crenata*
- 779 *Bryotropha affinis* (Haw.) — after the (**H6**) record add: **First confirmed Irish record**
- 1228a *Pammene ignorata* Kuzn. — Wetmoor should be in VC 34 and not VC 33 as printed.

to the 2000 Review

all the records for Torry Bay LNR should be ascribed to VC 87 and not VC 85 as printed. Of these, the records of the following species would have, at that time, been new to VC 87:

- 518 *Coleophora mayrella* (Hübn.)
- 731a *Eulamprotes immaculatella* (Dougl.)
- 815 *Scrobipalpa nitentella* (Fuchs)
- 843 *Aproaerema anthyllidella* (Hübn.)
- 892 *Mompha subbistrigella* (Haw.)
- 905 *Blastodacna hellerella* (Dup.)
- 1178 *Epiblema roborana* ([D. & S.])
- 1439 *Trachycera advenella* (Zinck.)



OBITUARIES

Eric William Classey 1916 to 2008



I first met Eric in October 1949, on a joint expedition to the Isle of Wight in search of *Sedina buettneri*. The nights were cold and mothing was hard work, but to me, aged 19, it was a great adventure, memorably enlivened by Eric's bubbling personality. Next year, I was invited to join the same party on a trip to the Burren, hoping to confirm the presence there of *Calamia tridens*, then known as *Leuceria virens*, a specimen of which had been taken by chance the previous year. The rain came down in sheets, but again Eric was irrepressible, there were fits of uncontrollable laughter, and we found *virens* and much else. Shortly afterwards, I visited Eric at his home in Feltham and

saw his beautiful collection, immaculately set, and upon which I tried to model my own setting.

Eric William Classey was born on 2 November 1916 at Queens Park, London and educated, to the age of 14, at Essendene Road School in the same district. He was already keenly interested in Natural History, and after leaving school he worked for a time as a biological assistant at St Mary's Hospital Medical School. Soon after he became a setter at the British Museum (Natural History), and remained closely associated with the BM for the rest of his life. During World War II he worked on mosquitoes at the Entomological Laboratory at Mytchett in Surrey, and in his spare time he made himself familiar with the clearwings, Sesiidae, of the neighbourhood. After the War, he worked at Watkins and Doncaster at their shop in the Strand, like a spider at the centre of a web to which all serious entomologists were drawn.

From this modest start there sprung a career and a personality that can only be described as extraordinary, and the man whom his multitude of friends will always remember. The first issue of *Entomologist's Gazette* appeared on 1 January, 1950, founded and edited by E.W. Classey and R.L.E. Ford. It combined a mixture of erudition and lightheartedness typified by a series called, 'It happened at...'. This journal has flourished ever since, but the humour has been put aside. At about the same time, Eric set up his own business, E.W. Classey Ltd, ably assisted by his wife, Ivy, dealing in second-hand books, mostly on Entomology. Somehow, he managed to make a comfortable living while

providing a real service to entomologists. His generosity in this respect was remarkable: he knew what his clients needed, made every effort to satisfy the need and, most remarkable of all, would tell his more impecunious clients, myself included, 'I know you will want this book. It costs £100, but pay me when you can'. He also *gave away* many of his own books. The business soon acquired a world-wide reputation. He used to collect postage stamps off his correspondence, and a few years ago he discovered that my wife, Jane, was interested in stamps. He subsequently sent her box after box for her to select from.

A combination of business and pleasure, which he could now afford, enabled him to travel widely. He went to Borneo with W.S. Bristowe in search of rare spiders, to Madeira with Eric Gardner and "Tiger" Tams, to Japan, the USA, Nigeria and many other places, assessing Libraries which had come up for sale, collecting, although he had long since disposed of his own personal collection, and meeting friends. At the same time, he became a prominent Freemason, served for several years as a Justice of the Peace, enjoyed Gilbert and Sullivan Operetta, studied foreign languages, did the *Telegraph* crossword, played Scrabble and was an accomplished ballroom dancer. Eric was a Fellow of the Royal Entomological Society, President of the (then) South London Entomological and Natural History Society in 1952, and also President of the Amateur Entomologists' Society and Vice-President of the American Lepidopterists' Society. He was one of the eight Members of the exclusive Entomological Club. His life was coloured by a love of words. Any new word he came across was checked for definition and added to his already extensive vocabulary. He deplored the misuse of words, and his many phone calls were mostly to recount his latest, often very feeble, joke or to draw attention to some dreadful gaffe he had unearthed in the newspaper or heard on television. And remember he left school at 14! Towards the end, despite a debilitating illness, he mercifully retained an alert mind and his irrepressible *joie de vivre*. He died on 7 September 2008.

In 1939, Eric married Ivy Ash, with whom he enjoyed a blissful life until she died in 1982. In her memory, when he started publishing works on Natural History, he called his company Hedera Press. They had three sons and a daughter, and there are eight grandchildren and three great grandchildren. To them we extend our condolences, and with them, we are privileged to remember with affection...Eric Classey

BARRY GOATER

Eric Classey

The death of Eric Classey marks the loss of another of the talented band of post-war lepidopterists who did so much to influence the study and collecting of UK Lepidoptera in those rapidly changing times.

Eric and I first met in 1945, when I was sent as military conscript for post-basic training to Mytchett where Eric was preparing for release. One year on I was

posted to East HQ Hounslow in the happy knowledge that Eric was living in nearby Feltham and where I became a regular visitor to Eric, his wife Ivy and their young family. I was still at the youthful stage of being fascinated and excited by the biggest, rarest and most impressive moths and so quite overwhelmed when Eric gave me a pair of his *fraxini*. That gesture typified his generous nature and especially his encouraging approach to the younger generation that shone through his life's work in commerce, collecting and in the entomological literary world.

In 1947 he joined me in working the Sussex coast harvested fields for *sacaria* in its wonderful range of colour variants that in later years we were able to repeat under temperature-controlled experiments. The Brecks and fens of East Anglia held much attraction for him as regular venues where he saw the Breck decline of both species and habitat as forest plantations and intensive agriculture expanded. Eric's witness of *pallustris* at Brandon remains the only modern record of that species from Norfolk and Suffolk and at paraffin lamp at that; we worked hard for our moths then! His later specimen of the geometer *Costaconvexa centrostrigaria* is not only the sole UK record, but the most distinguished ever for Feltham.

It was at that time that the Robinson brothers introduced their MV trap concept that changed the understanding of moth distribution, habits, populations and relative abundance. Eric demonstrated the dramatic power of MV in the garden of my Arundel family home with *l-nigrum* one of the first eye-openers. This was the era of Cockayne, Williams and Kettlewell who with Eric quickly explored the newly-resident species and migrants that MV revealed and Leslie Goodson was kept hard at work in Tring setting this host of material. For there was then along the south coast a similar influx of rare moths into south-east Kent in post-war years as we have seen on much expanded scale in recent times, and Eric was as thrilled as the rest of us to see *lunaris* larvae on the oak stool growth, *salicalis* amongst the aspens and *Catocala* at sugar. The post-war boom saw interest in Ireland re-ignited with Burren Green the star attraction of discoveries that continued to be made; the account by Eric and the Robinsons of the long trek by ancient Rolls set the style of narrative to be followed by others and so humanised the traditional accounts dominated by species lists.

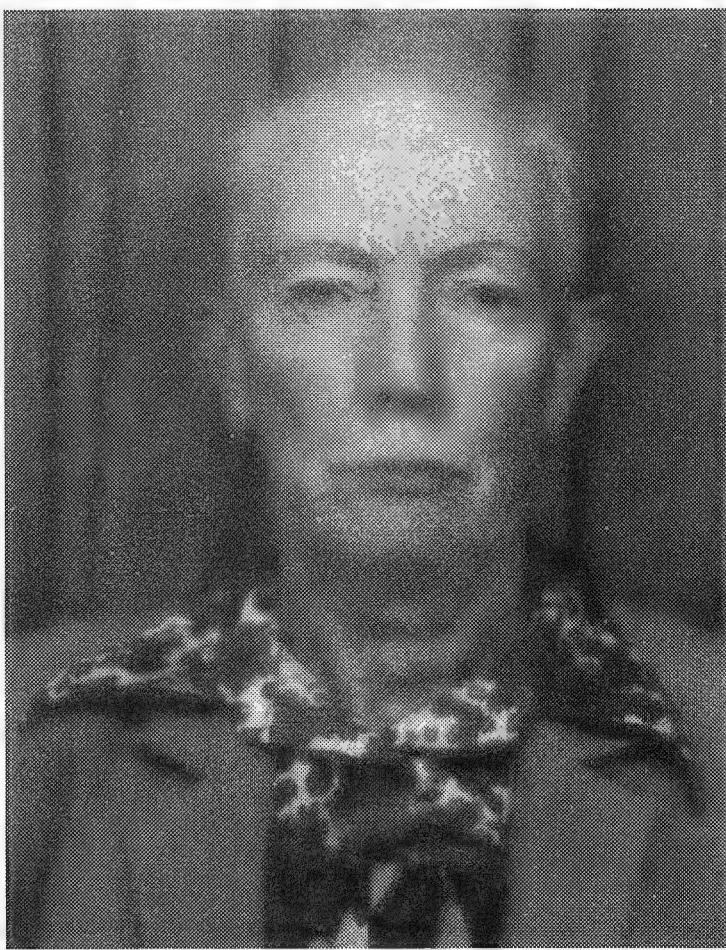
Eric's early working life was passed in the bowels of the then British Museum (Natural History) in South Kensington from whence he moved to Watkins and Doncaster then in the London Strand, but he soon embarked on a career as antiquarian bookseller that blossomed into world-wide markets and that took him to the capitals across the globe. A long-standing interest and knowledge of historical entomology so enriched his prolific and well illustrated catalogues that they will have become collectors' *desiderata* in their own right. In 1950, with Ford, he introduced the *Entomologist's Gazette* as an additional journal for lepidopterists and which in effect replaced the ailing *Entomologist* and he remained for many years principal editor and then panel member. A member of the South London Entomological and Natural History Society (now renamed) since 1936, Eric was President for 1952 and his Presidential Address in the following year was entitled

"Separation Characters of some British Noctuid moths" along with a call to make young visitors and members feel at home, both subjects dear to his heart.

When the run of Keepers of the Museum as Chairman of the Rothschild-Cockayne-Kettlewell Committee ceased, Eric was the obvious choice which, if not rags to riches was certainly from setting room to top chair! This task he carried out effortlessly, spiced with tales both engaging and risque; he enthusiastically backed both the innovation of RCK Trust Research Fund for moth projects and the RCK website intended to feature (eventually) all UK moth and butterfly species adult and early stages. In 2007, Eric volunteered his retirement from the RCK Committee Chair, having a few years before relinquished his book business interest, changed his home and settled into the quiet peace of the west country; he has now joined that band of stalwarts whose originality and dynamism helped shape better our understanding of the fauna that we enjoy today.

GERRY HAGGETT

Brian Kenneth West 1919 to 2008



The entomological community lost another of its well-respected members with the death of Brian West who passed away at his home in Bexley, Kent, on 24 August 2008 at the age of 89 and after a short illness.

Brian lived for most of his life in Kent. He was born on 20 April 1919 in Erith and attended the County School for Boys in Gravesend, where he excelled at running. His life-long interest in the Lepidoptera was kindled during his school days. He attended the University of Exeter in the late 1930s continuing to show his athletic prowess as a runner and representing the University at a number of events. He later joined the RAF as a

Physical Education instructor, travelling widely, and from 1945 to 1946 enjoyed a posting to New Providence Island in the Bahamas where he was able to form an extensive collection of butterflies, subsequently publishing a paper on the biogeography of these insects. In 1959 he was appointed to Bexley Grammar School to teach Geography, Geology and PE, where he remained until his retirement in 1979.

His abiding interest was in tropical butterflies and he collected widely in Malaysia, West Africa, South America and the West Indies. He joined the South

London Entomological and Natural History Society in 1947 after leaving the RAF and moving back to Kent, and became increasingly interested in the macrolepidoptera, particularly in his local fauna. He was a regular attendee and contributor to the Kent Lepidopterists' Group up until the time of his death.

Brian was a prolific writer of papers, notes and observations with his first contribution to the *Record* dating back to 1964, and his last, published posthumously, in the September 2008 issue. He was meticulous in his observations of the behaviour of butterflies and moths, and keen to investigate gaps in our knowledge, for example in tracking down the natural food plant of *Idaea rusticata* (= *vulpinaria* H.-S.) (*Ent. Rec.* **86**: 258-259 and **92** : 31-32). He was particularly interested in the forms and aberrations of moths and named and illustrated a number of these (*Ent. Rec.* **99**: 141-144), and published numerous notes on others.

Brian was a very private man, normally travelling and collecting on his own, but was readily recognisable in public by his startlingly individual dress sense! His frail appearance disguised a robust constitution. He was a keen table tennis player into his seventies, and was still travelling on his own to collect in South America during his 80s. He possessed an excellent memory, a keenly analytical mind and was punctilious in his attention to grammatical accuracy – although less forgiving of others who strayed from the path of precision. He firmly believed that both the body and the mind would retain their fitness through exercise and, in his early seventies, decided to exercise his mind by enrolling on a part-time GCE A Level course at the local Further Education College. This proved to be a success, and every other year after that he enrolled on a new A Level course, eventually accumulating an impressive portfolio of qualifications covering both the sciences and the humanities.

When this author edited the *Record*, Brian was a regular visitor. He would arrive in his battered and gaudily painted van, accompanied by his dog 'Scruffy', to discuss his future contributions to the *Record*. He would debate, at length, the *minutiae* of the forms, aberrations and distribution of Kentish Lepidoptera, pausing occasionally to look disapprovingly at the paucity of the author's Macrolepidoptera collection. He was, nevertheless, an agreeable companion and always willing to share his knowledge and ideas. He will be greatly missed, not only for his contributions to entomology, but as a 'character'. Some of his collection will go to the Natural History Museum. He is survived by his daughter, Juanita, to whom we extend our sympathy.

PAUL SOKOLOFF

***Monochroa suffusella* (Douglas) and *M. palustrella* (Douglas) Lep.: Gelechiidae in West Norfolk**

On 15 July 2008 Mike Ottley and Jackie Welton invited me to run lights at Lynford Arboretum, Norfolk. The Arboretum is located on the edge of Thetford Forest and close to Bodney/Stanford training camp area. Trainee foresters started planting trees which formed the basis of the Arboretum in the late 1940s. There are now over 200 tree species, with future plans to increase the collection.

After an exploratory walk around the varied flora and fauna, we decided to target an area of less-manicured old woodland that had apparently been 'left alone' for about 50 years. Mike set up his MV sheet adjacent to an ancient oak, while four traps were set around the mixed woodland. Luckily the wind dropped and it didn't take long for the moths to arrive. A total of 136 species were recorded, with highlights being the Festoon *Apoda limacodes* (in good numbers), Blackneck *Lygephila pastinum*, Clouded Magpie *Abraxas sylvata*, Dotted Fan-foot *Macrochilo cibrumalis* and the micros *Schoenobius gigantella*, *Anarsia spartiella*, *Strophedra weirana* and *Ostrinia nubilalis*. Also potted on the night was a *Monochroa* species that we did not immediately recognise; possible candidates were *Monochroa suffusella* or *M. arundinetella*. In September, I passed the specimen to Jon Clifton, who dissected the genitalia and pronounced that it was indeed the nationally scarce *Monochroa suffusella* – confirmation subsequently being provided by John Langmaid and Brian Goodey.

This is an interesting discovery. The species has never before been recorded in West Norfolk (VC 28). In East Norfolk (VC 27), two specimens have been taken in on the Norfolk Broads, by John Langmaid and the late E. C. Pelham-Clinton, whilst a third was caught at Barton Turf in 1983 by Mark Sterling (J. R. Langmaid. pers. comm.). One example was also taken at Redgrave & Lopham Fen in 1997 (K. Saul, pers. comm.) also in VC 27. According to Beckett (1999. A *Flora of Norfolk*), the main foodplant (cotton-grass *Eriophorum angustifolium*) does not occur at Lynford, although according to Bland et al (2002. in Emmet & Langmaid (Eds.) *Moths and Butterflies of Great Britain and Ireland*, volume 4 (2): 88-89) it is thought that the larva can also feed on certain species of club-rush (*Schoenoplectus*).

Shortly after the confirmation of *M. suffusella*, I was pleasantly surprised to receive an e-mail with a photograph of another glechiid, the distinctive *Monochroa palustrella*. It was recorded by Paul Millard at light on 24 July 2008 in Upwell, a Fenland village on the West Norfolk border. Apparently scarce in Norfolk, *M. palustrella* has only been recorded a few of times in East Norfolk (VC 27) with Broadland records dating from the 1990s at Burgh Common and Sutton Fen and, most recently, from Stoke Holy Cross in 2004. Paul has an extensive wildlife garden at his property adjacent to Welle Creek. Seven years ago he also planted a small meadow at this site. *M. palustrella* is documented as occurring on waste ground, dry pastures and sand-dunes. The larva feeds internally in the rootstock of curled dock *Rumex crispus* and possibly on other *Rumex* spp. Previously only recorded south-east of a line drawn from Somerset to

Norfolk, a specimen was taken on 26 July 2008 at Eakring Flash, Nottinghamshire (T. Pendleton. pers. comm.) – possibly the most northerly British record to date?

I am grateful to the Forestry Commission for permission to record moths at Lynford Arboretum.— J. R. WHEELER, Iveygreen, Town St, Upwell, Norfolk PE14 9AD (E-mail: jim@norfolkmoths.org.uk).

Some noteworthy moths from Chorleywood, Buckinghamshire, 2005 - 2008

Whilst 2008 seems to have been a particularly poor year for moths in general, there have continued to be some interesting and unusual catches here in Chorleywood. My garden site adjoins a railway embankment, which undoubtedly contributes to a wide diversity of flora and habitats within the range of the trap. There are areas of ancient woodland within 0.5 km (Carpenters Wood) and 2 km (Philipshill Wood). No doubt the location would have proved even better in the recent past, before the introduction of annual tree lopping and brush removal from the railway embankments, which is intended to prevent the wrong sorts of leaves getting onto the railway lines. Nevertheless, I have now recorded a cumulative total of 355 macro species at this site after four years of trapping using a Robinson-pattern trap with 125 watt MV lamp. Listed below, in species order, are some of the more unusual and unexpected visitors. My garden lies at the eastern edge of Buckinghamshire (VC 24) just a few metres from the western edge of Hertfordshire (VC 20) so that the fauna of both counties need to be considered whilst setting the records into context.

Tortricidae

1061 *Acleris literana* (L.) Singletons on 14 April 2006, 9 and 17 April 2007, 25 March, 4, 22 and 25 April 2008. All these would appear to have been overwintered adults. I have yet to see one during the published main flight period of August-September. Although there have been no other recent records in Hertfordshire, it might be concluded that this species is now becoming established in the Chorleywood area, since the very few Buckinghamshire records are all from the last 8 years and made in the southern part of the county. In Berkshire (VC22) it has generally been considered uncommon, but there have been seven records since 2003, widely scattered across the county. In Bedfordshire (VC 30) there are records for August 1992 and March 1993 in the Potton Wood area and two were recorded at Haynes in May 2006.

1231 *Pammene spiniana* (Dup.) A singleton on 2 September 2008. This moth usually occurs in the southern counties of England. It is readily identified, having a rather distinctive dorsal blotch, which would suggest that it is unlikely to have been overlooked by others. However, it has not been recorded in Hertfordshire since the beginning of the twentieth century, nor are there any recent records from Buckinghamshire or Bedfordshire. In Berkshire there is only one record post 2000.

Geometridae

- 1676** *Cyclophora annularia* (Fabr.) **Mocha** A singleton on 22 August 2006.

This species is formally listed as Nationally Scarce, but is not uncommon in the south-west Chiltern area of Buckinghamshire, to the west and north-west of High Wycombe and Marlow, and one was recorded in Amersham in 1991. The last Hertfordshire record was in 1937 but coincidentally, another was recorded on 22 August 2006, in Hampstead, Middlesex (VC 21), by Ray Softly. It had apparently disappeared from Berkshire after 1912, but since 2006, several colonies have been discovered around Maidenhead, Cookham and Windsor. In Bedfordshire it was recorded at Rowney Warren in the 1920s, then one each at Putnoe Wood in 1968 and Flitwick Moor in 1976.

- 1771a** *Thera cupressata* (Geyer) **Cypress Carpet** A singleton, presumably a second generation moth, on 11 October 2005, the first and only record to date for this species in Buckinghamshire. Not previously recorded in Bedfordshire, Hertfordshire or Middlesex. In Berkshire it was recorded twice at Wokingham in 2006. The Cypress Carpet is a suspected immigrant and a recently established resident in far south-eastern counties, so this sighting might suggest a north-westwards extension to its distribution.

- 1881** *Trichopteryx carpinata* (Borkh.) **Early Tooth-striped** A singleton on 16 April 2007. This species is considered fairly common over most of the British Isles, although occurring locally in central and eastern counties of England. The last Hertfordshire record (Ched George) was on 15 April 1983 at Bottom Wood, Maple Cross, just 2.5 km south of my Chorleywood site. It is not uncommon in the southern half of Buckinghamshire, but there have been few records from the extreme eastern edge of the county. The last Bedfordshire record was at King's Wood, Heath & Reach in 1987, but is fairly widespread and frequent in Berkshire. It may well be under-recorded due to its early flight period of April-May.

Arctiidae

- 2037** *Miltochrista miniata* (Forst.) **Rosy Footman** A singleton on 28 July 2008. Most frequently seen in southern seaboard counties of England and Wales, and more locally in old woodland areas of the midlands. Not previously recorded in south-west Hertfordshire. In Buckinghamshire it is rarely recorded outside the Bernwood area in the extreme mid-west of the county, but there is a single record in 1992 from Hodgemoor Wood, 6 km south-west of Chorleywood. It is regularly recorded in Bedfordshire, mostly on the Greensand ridge. In Berkshire it avoids the chalk downs but is widespread and frequent elsewhere.

- 2039** *Atolmis rubricollis* (L.) **Red-necked Footman** A singleton on 23 June 2005. Although resident in south-west and southern England and in south-west Scotland, this and other examples seen elsewhere in England are

considered most likely to be immigrants. There have been three records in Hertfordshire since 2001 (Plant, 2008. *Moths of Hertfordshire*; Herts Natural History Society). In Buckinghamshire it has appeared at several sites over the last few years, often several and not at times when other migrant species have been recorded, suggesting the possibility that it might have become established from previous immigrations. In Berkshire it had been considered rare but a number of recent appearances – one in 2000, two in 2001, one in 2005, six in 2006 and one in 2008 – suggest increased immigration and possibly residency, as at least one larva has also been found. There is a single Bedfordshire record from 1820 at Clapham Park Wood.

- 2045 *Eilema caniola* (Hb.) Hoary Footman** A singleton female on 11 September 2008) was another county first and equally unexpected. This species is Nationally Scarce and in the south and south-east the occasional records are thought to relate to primary immigrants. As a resident, it is known in Britain only in south-western coastal area, but in the last few years it appears to have spread along the coast of Dorset and inland in East Sussex, Surrey, Kent and part of Berkshire, with single records in Essex (Bernard Skinner, Pers. comm., via Colin Plant). Not recorded in Bedfordshire.

Noctuidae

- 2291 *Craniophora ligustri* (D & S) Coronet** The first one was recorded here on 27 June 2006, then there were eight more during July 2006, one in July 2007 and four during July 2008. Whilst not uncommon elsewhere in Buckinghamshire, it has spread in recent years from a few south-western sites but is still largely confined to areas west of Beaconsfield and to the south of the Chilterns. The only recent record for Hertfordshire is of one at Hatfield in 2006 (Plant, *op. cit.*). One was also recorded in 2006 at Studham, Bedfordshire, close to the border with Hertfordshire. However, it is widespread and reasonably common throughout Berkshire.
- 2292 *Cryphia algae* (Fabr.) Tree-lichen Beauty** A singleton on 25 August 2008. Although there have been several recent records for this immigrant species in Hertfordshire and Middlesex, this was a county first for Buckinghamshire. The first record for Berkshire was in 2006 at Appleford in the north-west of the county and the first record for Bedfordshire was in 2007 at Barton Hills Nature Reserve, close to the border with Hertfordshire. These sightings would appear to be a further indication of its continuing spread to the north and west.
- 2392a *Proxenus hospes* (Frey.) Porter's Rustic** A singleton female on 2 September 2008) was a county first for Buckinghamshire Previous UK records for this species have been confined to Cornwall and Scilly and so it is assumed that this example was a primary immigrant. It has not been previously recorded in Hertfordshire, Bedfordshire or Berkshire.

There is no doubt that the occasional rare or unexpected visitor to the moth-trap makes a welcome change from the usual hordes of more common species. It is remarkable that I have been able to add four new macro records for Buckinghamshire (VC24) in as many years. Some of these more noteworthy moths can be seen to be part of a continuing spread of habitat, particularly from the south-east or London areas, as has already reported elsewhere. But others are more difficult to explain and it will be interesting to see if these are truly isolated occurrences or may be the first indications of new territorial advances.

My thanks to Martin Albertini for comments on Buckinghamshire records, and to Colin Plant who confirmed several identifications and provided background information and comments on Hertfordshire records. Thanks also to Andy and Melissa Banthorpe, Martin Harvey and David Manning for their comments on the status and distribution of these species in Bedfordshire and Berkshire.— RICHARD ELLIS, 18 Whitelands Avenue, Chorleywood, Rickmansworth, Herts WD3 5RD (e-mail: richard.ellis@virgin.net).

***Coleophora follicularis* (Vallot) (Lep.: Coleophoridae): Elecampane *Inula helenium* (L.) confirmed as a larval foodplant**

For at least 25 years I have maintained a small stand of hemp-agrimony *Eupatorium cannabinum* in my garden and almost annually I have noted signs of coleophorid feeding activity. For the purpose of correct identification larvae have been taken at irregular intervals and bred to the adult stage and subsequent genitalia examination has always proved the species to be *C. follicularis*.

During mid-May 2008 I noted coleophorid feeding activity on my hemp-agrimony and the single larva discovered showed characteristics which led me to believe that the species present was again *C. follicularis*. The specimen was not taken. A few moments later I passed my stand of elecampane which is within about three metres of the hemp-agrimony but separated from the same by a concrete path and a low (40cms) wall. By chance my line of vision passed over the elecampane and I immediately noticed about a dozen blotches spread over three of the largest leaves. As I had literally only seconds before been examining coleophorid mines I gained an immediate impression, even at a distance of a couple of metres, that I was looking at very similar larval activity and a few moments later three cases were discovered on the underside of the damaged leaves. At the time I could not recall having noted any species of lepidopteron utilising elecampane as a larval foodplant, certainly from my own experience, and more particularly from the entomological literature in my library. With the prospective thoughts of a possible new larval foodplant in mind, and as the need to ascertain if larval development would be completed through to the adult stage, I immediately put thoughts of proposed gardening activities to one side and collected the three larval cases.

The larvae were supplied, as required, with portions of leaves cut out with scissors. In due course two of the larvae produced adults – a male on 23 June 2008 and a female on 8 July 2008, the identity of both specimens being confirmed by dissection undertaken by my brother Godfrey.

In (Emmet, A.M., 1988, *A Field Guide to the smaller British Lepidoptera*. British Entomological & Natural History Society) among the list of larval foodplants utilised by *C. follicularis* is, quote in the first instance from the systematic list, '*Inula*', and in the second from the list of foodplants etc. '*Inula* spp.'. The conventions applicable in this Field Guide are described in the chapter (Introduction to the First Edition, 1979), and is as follows, 'Where the generic name only of a foodplant is given, it indicates that the larva feeds on all (or the only) species in the genus. The generic name followed by 'spp.' denotes that the larva feeds on some, but not necessarily all, members of that genus'. As far as *C. follicularis* is concerned this in effect suggested that the larva feed on all the *Inula* species and on some, but not necessarily all, the *Inula* species simultaneously; a confusing condition. This obviously illustrated the uncertainties and confusion that existed at the time concerning various aspects of the life history of *C. follicularis* which in turn had become confused with *Coleophora trochilella* (Duponchel). Regardless of that interesting situation no specific *Inula* species, including elecampane is mentioned. However almost a decade later, and as a result of more research, (Emmet, A.M., 1996, *The Moths and Butterflies of Great Britain and Ireland, Vol. 3*. Harley Books) provides a detailed account dealing with past confusion between the larval habits etc. of *C. follicularis* and *C. trochilella* and is followed with a list of confirmed foodplants for *C. follicularis* as follows, common fleabane (*Pulicaria dysenterica*) ploughman's-spikenard (*Inula conyza*) hemp-agrimony (*Eupatorium cannabinum*) and creeping thistle (*Cirsium arvense*); other possible foodplants apparently remained unconfirmed.

Elecampane is a particularly robust species and before my experience detailed above I had occasionally thought that any larva finding itself on the plant would have been presented with a situation placing challenging demands on the digestion. That aside I suspect that the presence of *C. follicularis* on my particular stand of elecampane may have been fortuitous and entirely due to the close proximity of hemp-agrimony, one may speculate as to whether stands of elecampane isolated from the other recorded foodplants may receive the same attention by ovipositing moths.

As of the moment not only have I not discovered any published account connecting any British lepidopteron with elecampane.— M. H. SMITH, 42 Bellefield Crescent, Trowbridge, Wiltshire BA14 8SR.

***Emmelina argoteles* (Meyrick) (Lep.: Pterophoridae) recorded in Greece – new country, new habitat and new season**

On a collecting trip in south-west Bulgaria and eastern Greece during October 2008, in the company of Phil Jenner, Balázs Benedek and Tamás Hácz, we ran lights at a new, unknown site at Karakolithis, near Livadeia in the Stereá Elláda region of Greece, approximately 100 kilometres north-west of Athens. Amongst the very few micros on an otherwise very productive trip was a brown plume moth which we assumed was probably the widespread *Emmelina monodactyla*. However, subsequent dissection by CWP proved this to be a male of *Emmelina argoteles*.

Gielis (1996. *Pterophoridae*. In Huemer, Karsholt & Lyneborg, *Microlepidoptera of Europe*, volume 1. Apollo Books) records the distribution of this species as Germany, France, Austria, Hungary Japan and the nominate form from China. Since that publication appeared, the species has also been recorded in Britain (Higgott, 2006. *Entomologist's Rec. J. Var.* **118**: 195-197), who also lists Spain and Corsica. We are grateful to Cees Gielis for confirming that the present record represents the first occurrence of *E. argoteles* in Greece, extending its known geographical range significantly south-eastwards. The full data are:

GREECE: Stereá Elláda, Viotia, east of Karakolithis, 38°27'32"N:22°46'30"E, 375 metres, 22.x.2008, Leg. C. W. Plant & S. Beshkov. In coll. C.W. Plant.

Of equal interest is that the habitat where the Greek example was captured is apparently atypical. Most European examples have been found in damp habitats, unlike the relatively ubiquitous *E. monodactyla*. The British examples were caught at Wicken Fen, a classic wetland site. In south-west France, CWP has caught examples in a damp area on the edge of a woodland.

The Greek site is on the upper slope/summit of a low ridge ranging from 350 – 400 metres above sea level (Plate 5). Here, the habitat is maquis, dominated by *Quercus coccifera*, *Erica arborea*, *Caluna vulgaris*, *Cistus* sp., *Cotynus coggygria*, *Pistacia terebinthus*, *Myrtus communis*, *Olea europaea*, *Pyrus amygdaliformis*, *Punica granatum*, *Asparagus acutifolius* and perhaps *Arbutus* sp. About 2 km from the collecting locality there is a farm with sheep and goats and perhaps the grazing may have some impact on the vegetation there. As far as Lepidoptera are concerned, we recorded a number of sympatric and synchronic taxa, including *Sciota divisella* (Duponchel), *Lemonia taraxaci strigata* Rebel, *Watsonalla uncinula* (Borkhausen), *Isturgia (Enconista) berytaria* (Staudinger), *Antilurga adlata* (Staudinger), *Pachycnemia tibiaria* (Rambur), *Crocallis tusciaria* (Borkhausen), *Peribatodes umbraria* (Hübner), *Gnophos sartata* (Treitschke), *Idaea albitorquata* (Püngeler), *Eupithecia nanata* (Hübner), *Pyrois effusa* (Boisduval), *Praestilbia armeniaca* Staudinger, *Episema korsakovi* (Christoph), *Cleoceris scoriacea* (Esper), *Aporophyla australis* (Boisduval), *Dryobotodes carbonis* (Wagner), *Dryobotodes tenebrosa* (Esper), *Amoconia senex* (Geyer), *Polymixis serpentina* (Treitschke), *Luperina dumerili* (Duponchel), *Mythimna*



Plate 5. Habitat of *Emmelina argoteles* (Meyr.) at Karakolithis, Greece, 22 October 2008. Note the bare, un-vegetated patches – these are repeated throughout the area.

languida (Walker), *Xestia castanea* (Esper), *Agrotis syricola* Corti & Draudt, *Agrotis trux* (Hübner).

The known Spanish locality is intermediate between the west and central European habitats and that in Greece; the host plant will probably be a different species of *Convolvulus* or *Calystegia* (Cees Gielis, pers. comm.).

We are grateful to Axel Hausmann for identification of the geometrid species *Isturgia berytaria* and *Antilurga adlata*. — COLIN W. PLANT, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (E-mail: cpauk1@ntlworld.com) & STOYAN BESHKOV, National Museum of Natural History, 1 Tsar Osvoboditel Boulevard, 1000 Sofia, Bulgaria (E-mail: beshkov@nmnh.bas.bg).

A comment on the recent changes in legislation relating to insect collections

Just when I thought the conservation legislators couldn't plumb further depths of stupidity, I returned from France to read the announcement concerning the Conservation (Natural Habitats) (Amendment) Regulations 2007 (*Ent. Rec.* **120**: 162-164)! It depresses me to see such common species as *Parnassius apollo*, *Maculinea arion* and *Lopinga achine* listed as requiring special protection and thus proving the motives for this legislation are political and not ecological. This

suggestion was confirmed when I drove last week to the charming skiing slum of Isola 2000 in the Alpes Maritimes where the creation of the 'resort' has destroyed thousands of hectares of prime *apollo* habitat so that idiots in lycra can break bones whilst fashionably dressed! And yet I might be considered criminal for owning a single *apollo* specimen taken after 1994. Sorry about the rant but when you collect insects *and* antique firearms you really do start to think the world is out to get you! I do have a couple of questions ...

Surely an application for a license to possess the listed species is tantamount to an admission of possession and therefore an open invitation for a dawn visit from the boys in blue accompanied by some spotty little inadequate from Natural England?

What constitutes *proof* that the specimens were taken prior to 1994? I know that in the past courts have accepted the data written on birds' eggs as proof of the date of collection, but whenever I have asked about insect labels I have been told that the situation awaits a test case – and I would rather not be the test pilot!

Ultimately this bureaucratic nonsense does little to protect insects except to push up the black-market price of specimens and encourage low-lifes to go out and kill them for profit; look at e-bay for proof of my contention. It also discourages youngsters from taking up the serious study of insects. In a few years time there will be no specialist amateurs to identify the things that live on reserves. But that won't matter as the reserves will all be Tesco stores. Or ski stations. Sorry to go on – blame my age. Everyone else does! — MIKE BRYAN (E-mail: katharinebryan@hotmail.com).

Orthoptera (and allied insects) online: www.orthoptera.org.uk

On 19 November 2008, the *Orthopteroids (Orthoptera, Dermaptera, Dictyoptera, Phasmida) of the British Isles Recording Scheme* was launched as part of the Royal Entomological Society Special Interest Group meeting on Orthoptera. We hope that the new website will support existing recorders, encourage a new generation of recorders and continue the legacy of sharing Orthopteroid records. Indeed, in 2008 the Biological Records Centre uploaded almost 60,000 records on Orthoptera and allied insects to the NBN Gateway. These constitute decades of recording by many dedicated recorders. The remarkable range expansions observed for some Orthoptera species over the last two decades have shown, unequivocally, that where species are capable of exploiting new habitats, they have done so. Moreover, the profound changes that we have observed to date are clearly only the tip of the iceberg. This is an exciting time to record and study Orthoptera and we look forward to receiving your records.— PETER SUTTON, UK Orthoptera Recording Scheme Organiser, JAMES BACON, BJÖRN BECKMANN and HELEN ROY, Biological Records Centre, Centre for Ecology and Hydrology, Benson Lane, Crowmarsh Gifford, Wallingford, OX10 8BB.

**ANTHENE GEORGIADISI SP. NOV. (LEP.: LYCAENIDAE)
– A NEW BUTTERFLY FROM LIBERIA**

TORBEN B. LARSEN

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Abstract

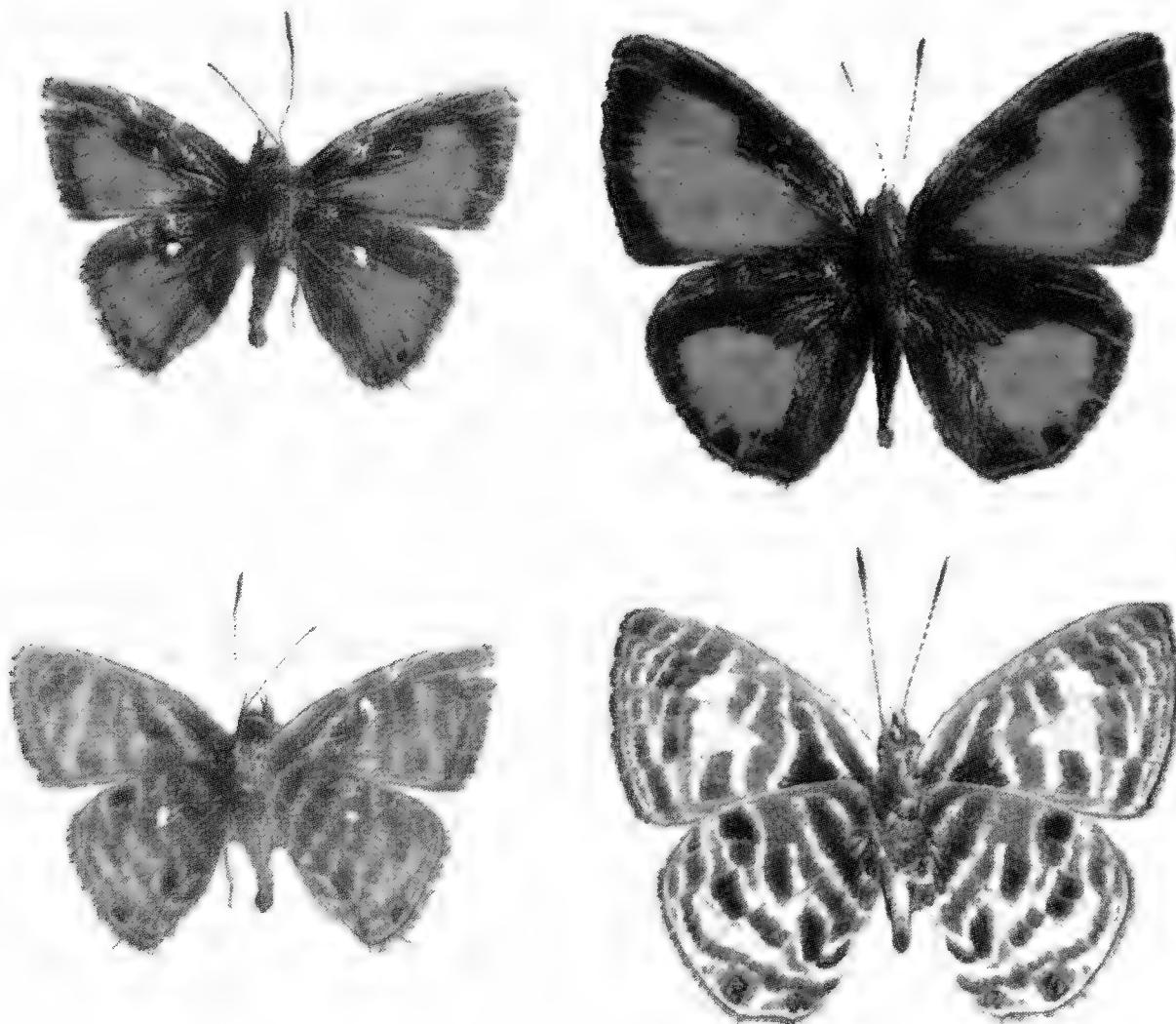
Anthene georgiadisi sp. nov. is described as a new species in the difficult complex of the “red *Anthene*”, in West Africa closest to *A. mahota* Grose-Smith, 1887. It is the smallest species in the complex. The type locality is the newly created Sapo National Park, one of the largest and most important protected areas in West Africa. *Anthene georgiadisi* sp. nov. was among 150 species collected during a brief visit by a non-specialist collector, emphasizing the need for continued intensive collecting in the dwindling forests of West Africa.

Key words: West Africa, Liberia, Sapo National Park, Lepidoptera, Lycaenidae, Lycaenesthini, *Anthene*, new species.

Background

Stephen Georgiadis visited Sapo National Park in East/Central Liberia in February 2008, which allowed him about five days in the actual forest. He had collected butterflies in Kenya during his youth and consulted me about his trip. Virtually no information on the butterflies of Liberia had come to light since the weighty monograph on Liberian butterflies was published on the basis of R. M. Fox’s extensive material from the 1950s, and the relatively small amount of additional data available (Fox *et al.*, 1965). This book was then by far the most comprehensive review of any country fauna in West Africa: in all some 475 species were listed, of which about 420 were in the Fox collection. In my book on the butterflies of West Africa (Larsen, 2005) I stated that this must be at least 250–300 fewer than actually occurred in the country: during research for the book additional Liberian species were found, including quite a few in the Fox collection at the Carnegie Museum, Pittsburgh. The fine collection of W. Peters in the Natural History Museum, London included many additional species, though its Lycaenidae were already included in the book on the basis of the excellent paper by Stempffer & Bennett (1956). My working list of Liberian butterflies now includes 555 species definitely recorded and a further 160 that are almost certain to occur – this adds up to 715, but the true number is probably closer to 800.

Because of this lack of data, I encouraged Georgiadis to include some butterfly collecting in his schedule and he collected a respectable total of 150 species during his five days, of which seven (5%) were new to Liberia. When we reviewed the papered material on his return, one was a tiny member of the *Anthene*-group (Lycaenesthini), even smaller than the tiny *Neurellipes fulvus* Stempffer, 1962. However, when it was taken out from the paper envelope, the underside indicated a close affinity to *Anthene mahota* Grose-Smith, 1887. It seemed to be a species new to science, but descriptions of new species on single



Anthene georgiadisi sp. nov. Holotype

Anthene mahota (Cameroun ABRI)

Plate 6. *Anthene georgiadisi* sp. nov. Holotype male (left) compared with *A. mahota* (Grose-Smith) (right).



Plate 7. Habitat of *Anthene georgiadisi* sp. nov. Rainforest bordering the Sinoe River at the edge of Sapo National Park.

specimens in this difficult genus is fraught. When Michel Libert, who is working on a revision of the more than 150 species in the *Anthene*-group, reached the *A. mahota*-complex he agreed that the species differed so strongly from *A. mahota* (very rare in Sierra Leone, Liberia, and Côte d'Ivoire (details in Larsen 2005)) that it deserved status a distinct species, which is described below.

Anthene georgiadisi sp. nov.

Holotype: ♂ Liberia, Sapo National Park, ii.2008 ($5^{\circ}24'40''N$ $8^{\circ}24'53''W$), S. Georgiadis leg., coll. African Butterfly Research Institute, Nairobi.

Upperside: Male forewing 7.0 mm, hardly two-thirds the size of an average *A. mahota*, which is the most closely related species and against which the description below is matched. The ground-colour is a shining golden-orange rather than the duller, but more saturated orange of *A. mahota*. The cell is almost wholly black with only some orange scaling along the distal end of the discocellular vein, which is more broadly orange in *A. mahota*. The forewing apex is more broadly black: the orange area between the end of the cell and the apex is the same width of the black apex, while the orange area is twice as wide in *A. mahota*. The margin is of even width from vein 3 to the tornus, where it widens in *A. mahota* and turns in along the inner margin. The veins are diffusely blackened before they reach the solid margin, while all of vein 1 is blackened, which is not the case in *A. mahota*. **Male hindwing:** The extent of orange on the hindwing is more extensive than in *A. mahota*, extending into the cell and encroaching on the abdominal fold. The costa is broadly black. There is a complete, but slightly diffuse, submarginal line that creates a well-developed orange band along the margin all the way from the black costa to the anal angle. The veins are slightly blackened on both sides of this line. The black tornal spot is smaller than in *A. mahota*. Though it is difficult to be sure from a single specimen, the wing-shape also seems to differ: the forewing seems more narrow and pointed and the hindwing margin is not as rounded as in *A. mahota*.

Underside: Both wings have the usual pattern of the group but are much less contrasting, giving the species a washed-out appearance when compared with *A. mahota*. Especially the white bands are strongly off-white and the two discal bands do not join to compose the white discal patch of *A. mahota*. The large blackish spot on the hindwing costa is wider than it is tall and so is the main tornal eye-spot, both being roughly quadrate in *A. mahota*.

Genitalia: According to M. Libert who inspected them, the male genitalia are indistinguishable from those of *A. mahota*, which is true also for other members of this group.

Etymology: It is a pleasure to name this species after its collector, Stephen Georgiadis. That he should have collected a new species among 150 during a brief visit to Sapo is a reminder that we still have much to learn about West African butterflies.

Discussion

Several other species in this group of *Anthene* have also been recorded on just a few occasions, in West Africa notably *A. mahota*, *A. helpsi* Larsen 1994, *A. atewa* Larsen & Collin, 1998, and *A. radiata* Bethune-Baker, 1910. *A. scintillula aurea* Bethune-Baker, 1910 is similarly rare, though the nominate subspecies in central Africa seems more common and widespread. In Nigeria and western Cameroun *A. emkopoti* Larsen & Collin, 1998 has also been recorded on very few occasions.

Further information

Stephen Georgiadis kindly provided the following salient aspects concerning his trip to Liberia:

Sapo National Park, in the south-east of Liberia, is in one of West Africa's least disturbed lowland rainforests. Biologically speaking, the area is still relatively unstudied because of Liberia's political instability. It holds enormous promise; for example, botanical experts who visited the Park in late 2002 found several species new to science in just 10 days (Fig. 2).

As an ecotourist with a special interest in butterflies, I had been on the lookout for an opportunity to visit the area for some time, but it is not easy to get to. My trip was arranged by Fauna & Flora International (FFI), the international conservation group, of which I am a sponsor. FFI support conservation projects all over the world, including places like Liberia, where there is a high degree of unique biodiversity but where the usual human pressures - poverty, population growth, or simply greed for natural resources - present major threats to fragile ecosystems. FFI managed my trip with huge efficiency, good humour and attention to detail. For example, they arranged for butterfly bait (fermented bananas) to be brewed in plastic bottles before I arrived and to be waiting for me in Jalay's Town, the village on the edge of Sapo where FFI's project is based (many butterflies, especially nymphalids, love fermenting bananas. They also like rotting prawns and carnivore dung, but I thought that asking FFI to arrange these might be a step too far).

I made contact with Torben Larsen well before the planned departure date in order to benefit from his enormous knowledge of West African butterflies. His emails did nothing to diminish my excitement about the area; 'Sapo possibly has as many as 500 different species, although nobody really knows...'

Getting to the Park is not easy. The road journey is tortuous and, even in the dry season, takes over 11 hours. I stayed in Jalay's Town, a village of about 150 people situated about an hour's walk from the Sapo Park boundary, where FFI is funding a conservation and study program. The Park Warden, Blamah Goll, kindly shared his accommodation with me and a team of three scientists from the Zoological Society of London (ZSL) who were carrying out a bio-monitoring project. We all went into the forest together on mini-expeditions of two or three days at a time. I collected butterfly specimens while in a separate part of the forest the ZSL team downloaded photos from their camera traps,

which had been set in transects through the forest. For both of us, the results proved to be extremely exciting. The ZSL team obtained some of the first-ever photos of pygmy hippo in the wild, as well as chimps, giant forest hog, zebra duiker, Maxwell's duiker, pangolin, water chevrotain, and several monkeys, mongooses and rodents. This biodiversity was also reflected in the number of butterfly species seen. My (very unscientific) analysis was that I caught probably one in three of the different species I saw, with a surprisingly low representation of the *Lycaenidae* and *Hesperiidae* (typically two of the most prolific families). Given that I only collected for about three days, during the driest time of the year, this implies that the butterfly biodiversity in Sapo is very high.

Thanks are due to Stephen van der Mark, Rob Howard, Jo Coombes and the rest of the team at FFI for arranging my trip, Blamah Goll (Head Warden at Sapo National Park) for his assistance and hospitality, and to Junior Nimley, an auxiliary ranger working for the Liberian Forestry Development Authority, who assisted me greatly in collecting specimens'.

Acknowledgements

Steve Collins kindly checked for similar material in the collections at African Butterfly Research Institute. *Blanca Huertas* facilitated the examination of relevant material in the Natural History Museum, London. In late 2007 *John Rawlins* of the Carnegie Museum was my patient guide during screening of the African holdings of the Carnegie Museum, Pittsburgh. *Michel Libert* kindly compared the genitalia and advised on the status of the new species. *Stephen Georgiadis* fortunately agreed to follow my suggestion that he collect butterflies in Sapo and it is a pleasure to dedicate the new species in his honour.

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SUBSCRIBER NOTICES

The French Moth Distribution Project

(This article has been translated from the French by the Editor, who accepts responsibility for any errors).

The Internet site www.lepinet.fr was created in 2006 and aims to provide photographs, distribution maps and ecological information on all 1,948 species of French Macrolepidoptera and Pyraloidea. A good degree of coverage has already been achieved using data from French lepidopterists, but many English colleagues, especially readers of the *Entomologist's Record*, either live in France or visit from time to time. I am therefore asking for cooperation with British lepidopterists on this project. I would be grateful to receive species lists from moth-recording sessions in France. Wherever possible, please provide details of the Département (equivalent of county), commune (equivalent of English parish), date of capture and name of recorder(s) as well as the list of species.

Contributors retain ownership of detailed data provided and only the Département will be identified on the site. I will not reveal any detailed locality without the agreement of the recorder. The source (recorder or publication) will be posted for each record. For more information or to submit lists, please contact me at my e-mail address below.— PHILIPPE MOTHIRON (E-mail: webmaster@lepinet.fr).

Sixth European Moth Nights – 21-25 May 2009

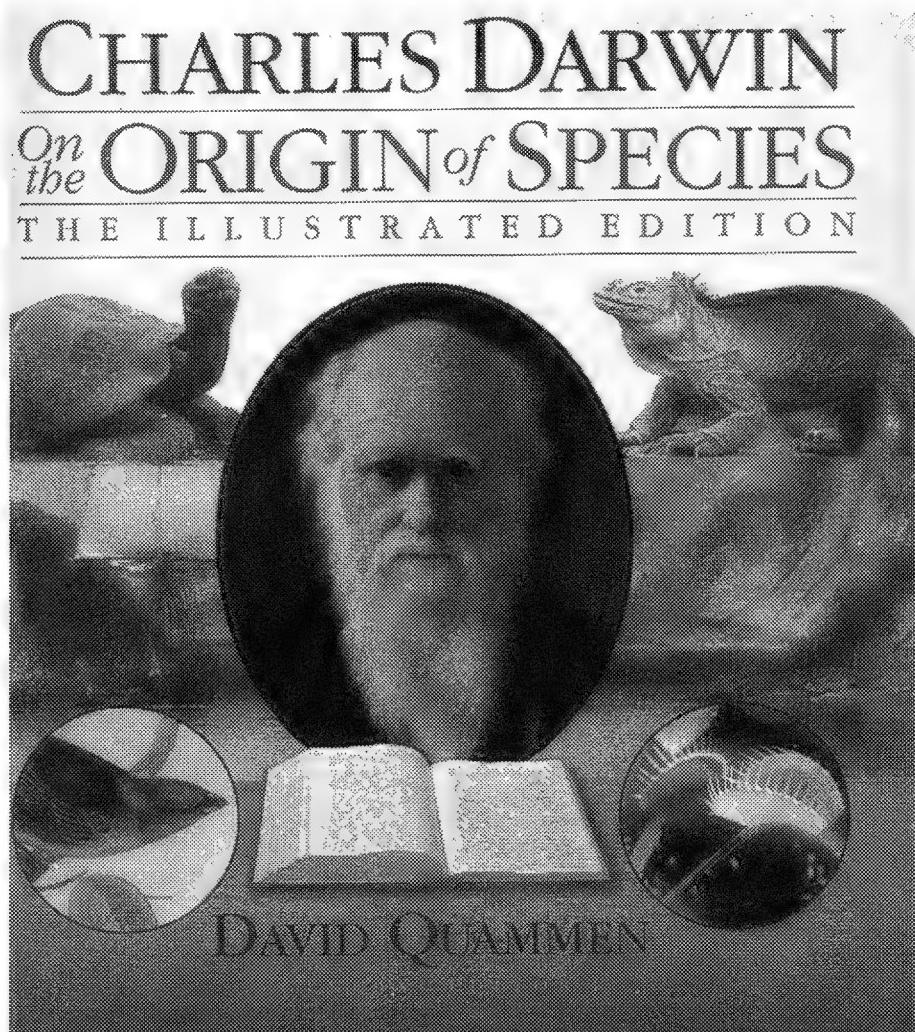
As in previous years, we invite you to take part in the Europe-wide moth observation to be held from 21 to 25 May 2009 at any independently chosen place (or places) in Europe. The purpose of this event is the cultivation of connections and community work, a wide-ranging European faunistic snapshot on macro-moths and pyralids and publication of the results. The project is confined to macro-moths in the traditional sense of the term (Macroheterocera) (including Hepialidae, Cossidae, Limacodidae and Psychidae families) and the Pyraloidea (Crambidae and Pyralidae).

You may collect in the same place every night or at different places on the different nights. Data should be sent in the form of a list (preferably as a table in EXCEL) by 30 November 2009 at the latest. An empty Excel table to be filled in with the relevant data can be found at the following web-sites: <http://lepidoptera/fw.hu> or <http://euromothnights.uw.hu>. It is essential that only moths determined beyond doubt should be included in your lists. In the case of any uncertainty, turn to reliable help or omit that 'species' from the list.

For advance planning, note that the seventh European Moth Nights will be held on 9-13 September 2010.— LADISLAUS REZBANYAI-RESER*, MIHÁLY KÄDÄR and GERGELY PETRÁNYI (*Entomologische Gesellschaft Luzern (Schweiz), CH-6003 Luzern, Kasernenplatz 6, Switzerland (E-mail: ladislaus.reser@lu.ch).

BOOK REVIEWS

Charles Darwin On the Origin of Species: The Illustrated Edition edited by **David Quammen**. Hardbound, 237 x 261 mm, xvi + 544 pp., numerous colour illustrations, ISBN 978 1 4027 5639 9. Published by Sterling (www.sterlingpublishing.com), 2008. £20.



throughout in addition to brief excerpts from his letters, diaries and correspondence bringing, so the same advertising blurb insists, both Darwin the man and his revolutionary discovery to life.

It is not any intention of a mere mortal such as I to review here the original words of Darwin which, as far as I can tell, are faithfully reproduced. My only comment on this aspect, in passing, is to express surprise and dismay that the great man's philosophy is still cited as mere 'theory'! Darwin discovered that species evolve over the course of generations through a process of natural selection. These ideas flew in the face of the strongly-held, religion-based belief that everything was created in one go by some mystical being; inevitably, the book immediately became one of the most controversial scientific works in history – and it still remains so today. One might be tempted to think that in more enlightened times the theory of evolution might well have been presented as the *fact* of evolution and all this ridiculous creationist thinking that pervades the brainless regions of society might have been by now eliminated.

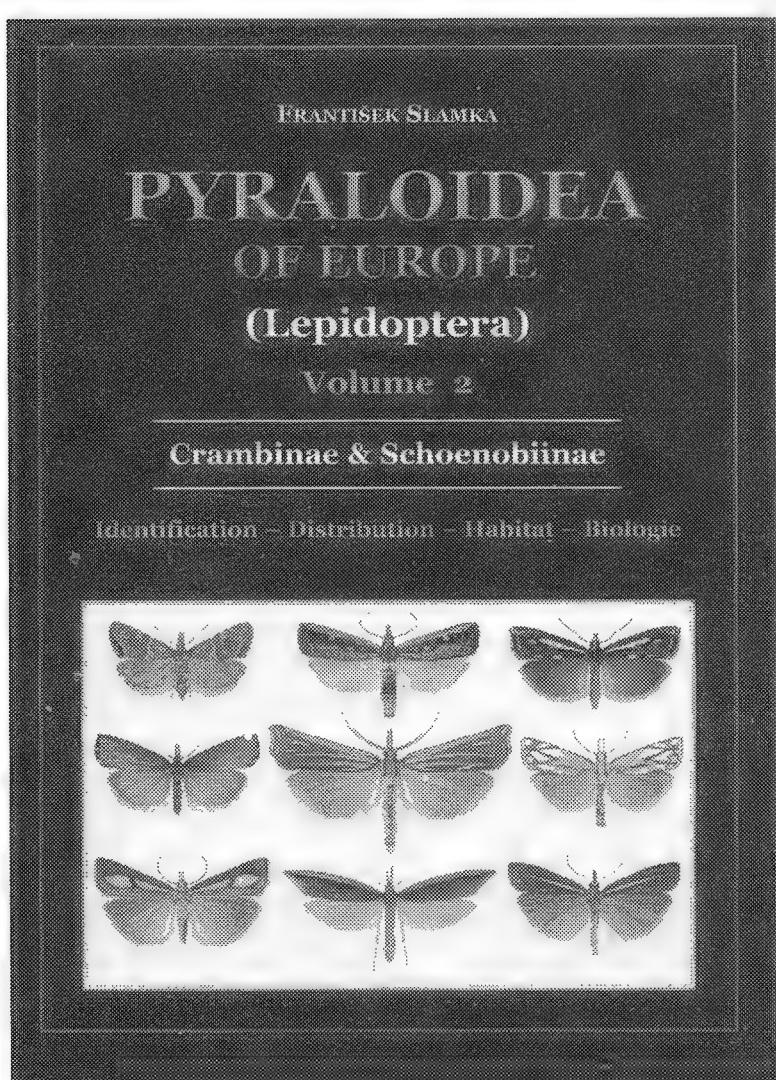
David Quammen, an American, is an award-winning science, nature and travel writer whose work has appeared in publications such as *National Geographic*, *Outside*, *Harper's*, *Rolling Stone*, and *The New York Times Book Review*. His choice of illustrative material to accompany Darwin's original 1859 text (rather than that of subsequent editions) is, to my mind, excellent and will indeed do much to help the publishers achieve their goal of making a work that is perceived as 'high brow' more accessible to a wider audience. His introductory chapter makes for fascinating reading and could easily be subtitled 'Charles

Few entomologists can have missed the fact it is the 150th anniversary of the publication of Darwin's ground-breaking work *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (the full title was applied only to the first edition – later editions were shortened). Now, this most important of natural science books is reproduced by Sterling Publishing in an illustrated version (the advertising blurb states that there are 'over 350 illustrations and photographs, many of them in brilliant colour'). In addition, reproductions of pages from Darwin's other well-known treatise, *The Voyage of the Beagle*, appear

Darwin – a potted History'. There are a few extremely minor niggles that betray the fact that Quammen is perhaps more or an editor and less of a scientist, such as, for example, on page 235 a picture of a display case of mantids is captioned as containing 'mantises', but pleasingly for an edited version of an English book, there are only very few American spellings that have slipped through the net.

As Quammen states, *Origin* was not written for experts, but for everybody who reads, thinks and wonders. These days, that might form a very small proportion of modern society and so this illustrated version, aimed at a wide audience, is particularly welcome and very highly commended by this reviewer.

Pyraloidea of Europe (Lepidoptera) Volume 2: Crambinae and Schoenobiinae by F. Slamka. 224pp., including 24 colour plates with 650 images of adult moths and 51 black and white plates of genitalia. 232 x 165 mm, hardbound. ISBN: 978 80 969052 5 6. Published by Slamka, Bratislava, September 2008. €59 (plus postage). Order direct from Slamka, Račianska 61, SK-83102 Bratislava, Slovakia or by e-mail to slamkaf@nextra.sk (web site at <http://home.nextra.sk/fslamka>).



Volume 1 of this important series, covering the subfamilies Pyralinae, Gelleriinae, Epipaschiinae, Cathariinae and Odontiinae, was published in 2006 and was reviewed by me in *Ent. Rec.* 119: 95-96. This new volume covers all the currently recognized total of 187 European species in subfamilies Crambinae (181 species) and Schoenobiinae (six species) – the grass moths. All British species in these two subfamilies are included in the geographical area covered by the work, which extends from Iceland in the north-west, east to the Ural Mountains, south-east to the Caucasus Mountains and south to the Straits of Gibraltar. All of the Mediterranean Islands are involved – including Cyprus, an island that is, unfortunately, omitted from most European works. European Turkey is included, but Asian Turkey is not. Species from the Azores, Canaries and Madeira are also listed.

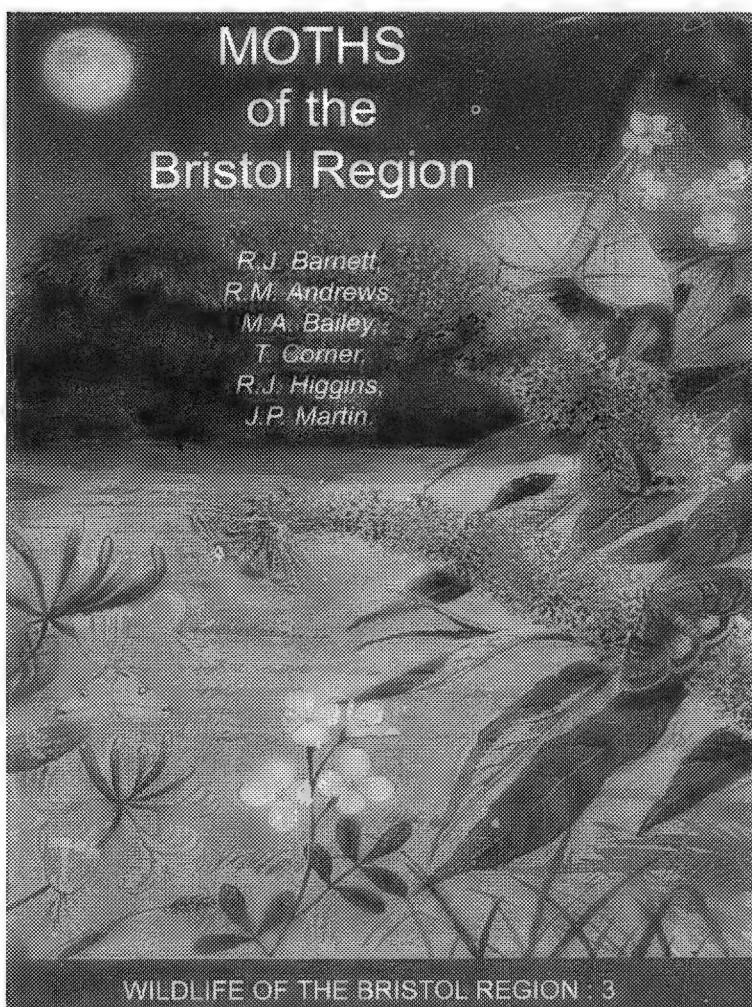
Adult moths are illustrated by photographs of 'half moths' (the right hand half) and most are presented at two times life size (a few of the larger species depicted at 1.75 times life size), which I find a convenient balance between them needing to be large enough for short-sighted types like myself to see the detail and small enough to see the overall 'jizz' of the moth. The genitalia are depicted by clear concise drawings in most cases or by good, sharply focused monochrome photographs for a few species. These, which cover both males and females, are clear, accurate and extremely useful and I am extremely pleased to see that with the exception of *Catoptria mediofasciella* (Zerny), a species known only from the Holotype collected in Armenia, all species are illustrated.

The species accounts in this series are particularly useful in that they present what is, as far as I am aware, the first ever set of distribution maps for European pyralids (although some maps are inevitably incomplete). This will greatly facilitate our understanding of the British fauna, now that we can at last consider it in the wider context; it may also stimulate some of us to look out for potential new colonisers, especially in the south. Helpful black and white drawings with arrows are provided to draw attention to the critical identification features mentioned in the text for some species. It should be added that the text is in English; volume one was produced in both English and German, but the latter now seems to have been dropped.

Apart from the Crambinae volumes of *Microlepidoptera Palaearctica*, which are now over 40 years old, hard to find, prohibitively expensive for most people and include a large number of non-European species, this is the *only* available work on the grass moths available; since there is *still* no sign of any British pyralid book appearing it is, in my opinion, an absolutely essential work of reference for anyone even remotely interested in British pyralid moth. I repeat what I said about volume 1: buy it now as I fully expect it will be extremely popular and so go out of print all too rapidly.

Colin W. Plant

Moths of the Bristol Region by R. J. Barnett, R. M. Andrews, M. A. Bailey, T. Corner, R. J. Higgins & J. P. Martin. Hardbound, 526 pp, 192 x 253 mm., ISBN 978 0 9545235 1 0. Bristol Regional Environmental Records Centre, 2008. £29.95 plus postage. Available from BRERC, Third Floor, Bristol Central Library, BS1 5TL.



This is number 3 in a series entitled *Wildlife of the Bristol Region*, butterflies having been covered in the second volume. The Bristol Region is the modern-day successor to the administrative county of Avon, which vanished in 1997. It rests on the southern side of the Severn Estuary and includes the western parts of the Cotswold Hills, the northern edge of the Mendips and all of the Avon Basin with its associated levels, moors and the separating limestone ridges, extending from approximately Watton-under-Edge in the north to Norton-Radstock in the south and from Weston-super-Mare in the west to Bath in the east. Unfortunately, there does not seem to be any indication of which Vice-counties are affected by this ecologically diverse area, though by deduction I think these are parts of South Somerset, North Somerset and West Gloucestershire.

An introductory chapter on habitats is supplemented by in-depth examinations of moth studies undertaken at various discrete sites, including the Avon Gorge, Leigh Woods, Bristol Downs, Chew Valley Lake and a number of gardens; that concerned with Chew Valley Lake takes the form of a paper on the life-cycle of the Twin-spotted Wainscot

Archana geminepuncta (Haw.) which is essential reading and presents much original material – it is also well-illustrated, as indeed is the entire book. The species accounts, which occupy pages 69 to 511, present a comprehensive review of both macros and micros. Historical and modern records are included under each separate species heading though rather few of the micros are sufficiently well-recorded to warrant either the distribution map or the adult flight-period histogram which is provided for the macros. National and Bristol Region status is presented for each species. Colour picture of moths, larvae and leaf-mines punctuate the text and make using the book a pleasurable experience.

As one who has, himself, had a go at compiling a local list and who is, consequently, fully aware of most of the problems that are all too often encountered in that process, I am loathe to direct any criticism at the authors; happily, there is none of substance that I need to suppress! I would not expect a local authority to fund a book that included any sort of detailed recommendations for conservation action that might tie its own hands, but I would have preferred to see the authors draw together the species of regional conservation concern in a single list, so that ecological consultancies, planning officers and others could be aware of the significance of lists provided to them by external lepidopterists. I am dismayed to see an apparent suggestion (page 52) that specimen collecting should be limited to universities and public museums and whilst there is indeed a comment that '*it is recognized that some moths can only be separated from similar species by dissection of the genitalia so have to be collected*' there is an over-riding message that photography is a perfectly adequate substitute. This suggestion, of course, is nonsense and I can only think that it reflects a politically correct attitude on the part of the local authority within a book whose six authors are not all entomologists. I am a little upset to discover that a small number of my own records that were submitted a number of years ago appear to have gone astray. These include, amongst others, *Pseudatemelia josephinae* (Toll) which I took at Conygar Quarry on 26 June 2001 – the book lists only two records for this species, for Leigh Woods, 30 June 2001 and Brown's Folly, 11 July 2003. Discussion with one of the team of authors suggests that this was a freak occurrence and does not represent any sort of pattern. In any event, the fact that *my* records are missing does not in any way alter my view that this is an excellent book, with comprehensive and factually correct species data and full of valuable information as well as, with the exception of page 52, being a pleasure to hold and read. The price is entirely reasonable for a book of this size and type and I commend the work to all.

Colin W. Plant

ANNOUNCEMENT

New entomological journal: *Entomofauna Helvetica*

Entomofauna Helvetica is a new Swiss entomological journal produced by collaboration between the Natur-Museum Luzern and nine local Swiss Entomological Societies. The new journal is dedicated to entomofaunistics of Switzerland and the surrounding regions and will be published as a single annual volume of about 200 pages. For more information contact Madeleine Herger, Librarian, Natur-Museum Luzern, Bibliothek / Schriftentausch, Kasernenplatz 6, CH-6003 Luzern, Switzerland (E-mail: madeleine.henger@lu.ch).

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edited by C. W. Pinn



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Guidelines for Contributors

We welcome contributions on British Isles Lepidoptera, on non-British Lepidoptera where likely to be of interest to British researchers and on other groups of British Insects for which specialist English language journals do not currently exist. We accept descriptions of new species. Other subject matter may be accepted entirely at the discretion of the Editor, whose decision is final.

Please follow the format in this issue. The Editor will be pleased to assist in any way possible, especially if you are a first-time author. If in doubt – contact me! Ideally material will be compatible with Microsoft Word and will arrive via e-mail, but we will accept typescripts or *neatly* hand-written contributions for shorter Notes.

Notes are reviewed and accepted by the Editor and are especially welcomed. We aim to publish these within two issues of acceptance.

Full papers must include an Abstract and a maximum of ten Key Words and acceptance is subject to external peer-review; full papers may be returned for changes before final acceptance and we aim to publish these within three or four issues of original receipt.

Black and white photographs are welcomed. Colour photographs may be submitted but will only be used if they are deemed relevant by the Editor.

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Jade Hawk-moth *Daphnis hypothous* Cramer (Lep.: Sphingidae) never added to the British List

In July 1879, an example of *Daphnis hypothous*, an Asiatic and Far Eastern species, was captured in Crieff, Perthshire. Initially it was recorded as an Oleander Hawk-moth *D. nerii* and the mistake was not rectified until 1891 (South, R., 1907. *The Moths of the British Isles, series 1.* Warne, London). This record is included in Heath & Emmet (1979. *The Moths and Butterflies of Great Britain and Ireland vol. 9.* Curwen Books, London) and mentioned by Pittaway (1993. *The Hawkmoths of the Western Palearctic.* Harley Books, Colchester).

Despite such documentation, it appears that *D. hypothous* has never been officially added to the British list. It is missing from Bradley (1998. *Checklist of Lepidoptera recorded from the British Isles*). Thus it is omitted from the otherwise comprehensive appendix of doubtful or adventive species in Waring & Townsend (2003. *Field Guide to the Moths of Great Britain and Ireland.* British Wildlife Publishing, Gillingham).

Whatever one's views about the validity of including imported species on the British list, there must at least be consistency. Certainly *D. hypothous* has a stronger case than many of the dubious species presently included, often dating back to the early years of the 19th century and suspected to be fraudulent claims or misidentifications. If *D. hypothous* were to be added, it would follow *D. nerii* and be numbered 1985a.

My own view is that lepidopterists should follow the lead of the ornithologists and divide our British checklist into different categories. The main list would comprise those species occurring naturally in Britain either as residents or as genuine migrants arriving here without human aid. Adventives and importations would be confined to a separate section, unless they became established here in the wild.— Roy Leverton, Whitewells, Ordiqhull, Cornhill, Banffshire AB45 2HS.

First record of field parasitism of immature stages of the Harlequin Ladybird *Harmonia axyridis* (Pallas) (Col.: Coccinellidae) by the braconid wasp *Dinocampus coccinellae* (Shrank) (Hym.: Braconidae)

The harlequin ladybird *Harmonia axyridis*, has been the subject of multiple introductions in Europe and North America to serve as a biocontrol agent of crop pests, such as aphids and coccids. However, it has spread widely from its initial introduction sites, and is now considered a pest species in its introduced range, because of the threat posed to native insects via competition and/or predation, its proclivity to form large overwintering aggregations in houses and economic damage inflicted through feeding on grapes and other soft fruit when other prey are scarce (Koch 2003, *Journal of Insect Science*, 3: 32-47). First recorded in the UK in 2004, the harlequin has become locally abundant in England, with multiple records from Scotland and Wales. This, combined with its voracity and aggression, has raised concerns that it may eventually extirpate native aphidophagous ladybirds (Brown et al. 2008, *Biocontrol* 53: 55-67).

One possible explanation for the success of exotic species in their introduced range is the 'enemy release hypothesis' (Colautti et al. 2004, *Ecology Letters* 7: 721-733), which states that invasive species leave behind the predators, pathogens and parasites that regulate their densities in their native range. It is therefore of great interest to investigate whether the natural enemies of British ladybirds are adapting to Harlequins as an alternative host or prey.

Dinocampus coccinellae is a parasitoid braconid wasp of coccinellids worldwide. Female wasps oviposit into adult ladybirds and a single larva develops inside the still-living ladybird. When the larva is ready to pupate, it bites through the nerves supplying the legs of the ladybird host, causing paralysis, and weaves a cocoon underneath the ladybird from which the adult wasp emerges (Majerus 1994, *Ladybirds*. No. 81, New Naturalists' Series, HarperCollins). Before the arrival of the harlequin in Britain, 13 native coccinellid species were found to be attacked by *D. coccinellae*, with the highest parasitism levels of around 20% being recorded for *Coccinella 7-punctata*, *Coccinella 11-punctata* and *Harmonia 4-punctata* (Majerus 1997, *British Journal of Entomology and Natural History* 10: 15-24). While oviposition into ladybird larvae and pupae has been documented both in the laboratory and the wild (Smith 1960, *Canadian Entomologist* 92: 652), it is thought to be uncommon; indeed choice tests performed in the laboratory indicate that female wasps show a strong preference to oviposit into adult ladybirds (Geoghegan et al. 1998, *European Journal of Entomology* 95: 571-579).

Throughout the summer of 2008, an intensive effort was made to collect ladybird pupae in the vicinity of Cambridge, to compare eclosion rates between harlequins and native species, and to look for evidence of parasitism by the phorid flies *Phalacrotophora* spp. (Diptera: Phoridae) (Ware et al., in prep.). 1456 pupae of six species were found, the majority of which were harlequins (1120, or 77%). Nine adult harlequins eclosing from the pupae collected produced cocoons of *D. coccinellae*, representing the first conclusive evidence of field parasitism of immature stages of *H. axyridis* by this wasp. Of the nine cocoons, successful eclosion of an adult wasp was noted in four cases; of the remainder, two cocoons were known to have been predated by other ladybirds kept in the same petri dish. The parasitized pupae were all collected in the Cambridge area between late June and September, and represented 0.8% of the total number of harlequin pupae collected. Note that this is a conservative estimate of the true level of parasitism; since up to eight adult harlequins were kept in each dish, it is possible that some *D. coccinellae* emergent larvae or cocoons were predated before detection. It is also possible that the development of some *D. coccinellae* larvae within the host may have been impeded by the artificial diet fed to ladybirds in the laboratory.

This note is dedicated to the late Professor Michael Majerus (1954-2009).—
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SURVEYING FOR *CELYPHA WOODIANA* (BARRETT) (LEP.: TORTRICIDAE)

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Abstract

A brief summary of the occurrence of *Celypha woodiana* (Barrett) in Britain and Europe is given, together with notes on ecology. Information is provided on how to best survey for this elusive species.

Key words: *Celypha woodiana*, Mistletoe, mines, Apple, Pear, hawthorn, Crack Willow, Rowan, orchards.

Introduction

In July 1878, J. H. Wood collected a number of moths from the trunks of apple trees at Tarrington, Herefordshire (Bradley, Tremewan & Smith, 1979). These were described as a species new to science, *Brachytapnia woodiana* Barrett, 1882 (= *Celypha woodiana*), now sometimes called the Mistletoe Marble or Mistletoe Tortrix. Wood (1908) wrote in the Victoria County History for Herefordshire that there was no record of it having occurred outside the county, and that it was apparently unknown abroad. By Bradley, Tremewan & Smith (1979), it was given as having been found in Herefordshire, Worcestershire, Gloucestershire, Monmouthshire, and at a site in Somerset. Subsequently it has also been recorded in Warwickshire (N. Stone, pers. comm.). The moth was given pRDB 2 (Vulnerable) status in Parsons (1984) and in 2007 was confirmed as a UK Biodiversity Action Plan species (Parsons & Davis, 2007).

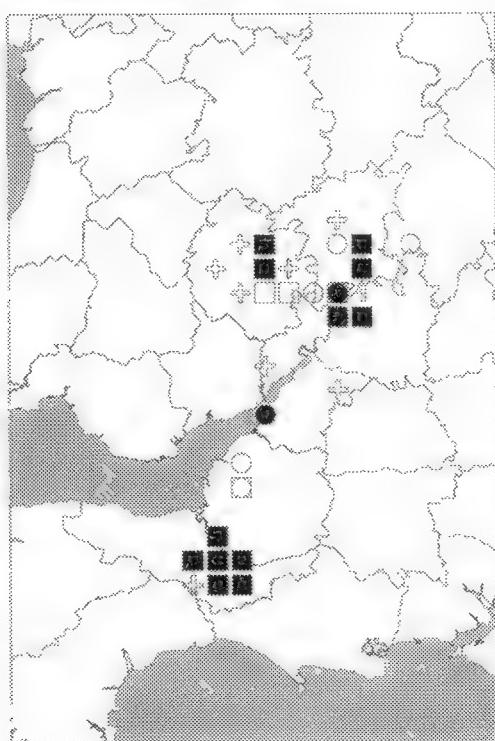
Karsholt & Razowski (1996) list the species as also being found in the European part of the former Soviet Union, Poland, Czech Republic, Slovakia, Germany, Belgium Luxembourg, France, Italy, Switzerland, Austria and Greece. There are no recent records from Belgium (e.g., <http://webh01.ua.ac.be/vve/Checklists/Lepidoptera/Tortricidae.htm>), but it has recently been found in Hungary in 1996 (Szabóky, 1996) and Turkey (Seven & Özdemir, 2007).

Life History and Habitat

The moth flies in July and August and is occasionally attracted to light. It has also been found on the trunks of apple trees by day, darting to the ground when disturbed (Bradley, Tremewan & Smith, 1979), although none appear to have been found by this method in recent years. The larva mines the leaves of Mistletoe *Viscum album* from autumn to the following May. At first the mine is quite inconspicuous, being small, crescent-shaped and marked by an entrance

■ Larval/Mine records from 2000 onwards
 □ Larval/Mine records from 1980 to 1999

● Adult records from 2000 onwards
 ○ Adult records from 1980 to 1999
 ♦ Adult records to 1980



Distribution of *Celypha woodiana* in south-west England and Wales. Vice-county boundaries are indicated.

numerous. As yet, the moth has not been found associated with Mistletoe on other typical hosts such as Poplar *Populus* spp. or Lime *Tilia* spp. Significantly, larvae have been found away from orchards in hedgerow situations on grazing levels.

Mines can occur at very low density, with thicker, more succulent Mistletoe seemingly preferred to drier clumps on distressed trees. The moth does seem able to survive on quite isolated clumps of Mistletoe, where there is not a great abundance of the plant.

Distribution

From 2000 onwards, larvae have been found in North and South Somerset (VCs 5 & 6), East Gloucestershire (VC33), Herefordshire (VC36) and Worcestershire (VC37), with a record of the adult from West Gloucestershire (VC34). Most recent records emanate from Somerset as a result of targeted survey effort by JM. The species appears not to have been recorded in Warwickshire (VC38) since the mid 1980s when it was found at Stratford-upon-Avon. The situation in Monmouthshire (VC35) is less clear, with Neil Horton (1994) repeating Bradley, Tremewan & Smith (1979) noting that it had been recorded at Tintern (Monmouthshire), however, Gaunt (2006) in *Gloucestershire Moths* refers to a 1967 record from Tintern of an adult at light recorded by L. Price. It may be that these are one and the same records; as yet no specimen(s) or notebook has been traced to clarify this situation.

hole. In early spring feeding takes place within a narrow gallery, the larva being a striking deep green colour. By May the mines are more conspicuous and enlarged into an inflated blister. The larva pupates in June in a loosely spun cocoon under bark or lichen growing on the branches of the host tree (Bradley, Tremewan & Smith, 1979). Previously tenanted mines can occasionally be found later in the summer, although many are thought to fall from the plant.

Bradley, Tremewan & Smith (1979) give the species as being restricted to old Apple *Malus sylvestris* orchards in the west of England. However, larvae have also been found on Mistletoe on Pear *Pyrus communis*, hawthorn *Crataegus* spp. and Crack Willow *Salix fragilis*, as well as a planted Rowan *Sorbus acuparia* adjacent to some old apple trees in an allotment (Simpson, 2005). Based on the records available Apple is the preferred host, with records associated with hawthorn the next most frequent, being half as



Plate 8. Orchard habitat supporting the moth in Somerset (photo: J. McGill). **Top right:** Early stage mine that can be found over the winter period (photo: J. McGill). **Centre right:** Later stage mine that can be found from late April to May (photo: M. Parsons/Butterfly Conservation). **Bottom right:** Adult moth (photo: M. Parsons/Butterfly Conservation).

How to survey

Although the adult moth has been found on the trunks of Apple trees in the past as well as at light traps, the easiest method is to look for the leaf mines from winter through to spring. At head height fully developed mines are straightforward to find although this may take a little time where it occurs at low density. The difficulty comes in searching higher up. A step ladder can help, and a pair of binoculars will assist with clumps beyond easy reach. Try looking from different angles as mined leaves are very easily obscured by others in the clump. It is also helpful to be familiar with what to look for. Just occasionally other microlepidoptera can be found on the leaves, with *Ditula angustiorana* (Haw.) having been bred from a spinning on Mistletoe. Damage and wear on the leaves can also superficially resemble a mine.

We would be pleased to hear of any records of this species, please contact either of the authors. If there is some doubt over the identity of a mine, a good quality photograph may suffice and aid confirmation of the record, particularly if the colour of the larva within was green.

Acknowledgements

We would like to take this opportunity to thank all those who have supplied or assisted with records for this summary, namely D.J.L Agassiz, M. Anthoney, B. Elliott, R. Gaunt, M.W. Harper, R. Homan, P. King, J.R. Langmaid, G. Meredith, N. Stone and M.R. Young. Additionally M. Honey at the Natural History Museum, London, is to be thanked for checking the specimens in the museums collections and for highlighting the Simpson and Szabóky references. We would also like to thank Les Hill (Butterfly Conservation) for the production of the map, from MapMate® using Digital Map Data © HarperCollins-Bartholomew 2007. Butterfly Conservation would like to take this opportunity to thank Natural England for their continued financial support of BCs Action for Threatened Moths Project.

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SCRUB ENCROACHMENT LEADS TO THE DISAPPEARANCE OF THE COMMON GREEN GRASSHOPPER *OMOCESTUS VIRIDULUS* (ORTH: ACRIDIDAE) FROM HEATHLAND AT MILL GREEN COMMON IN WRITTLE FOREST

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Abstract

The effects of scrub encroachment of heathland at Mill Green Common in south-east England is examined in relation to the Common Green Grasshopper *Omocestus viridulus*. It is concluded that the grasshopper has become extinct on this site and it is suggested that urgent scrub clearance needs to take place to prevent further losses of heathland plants and insects. The proposed creation of commons councils under Part 2 of the Commons Act (2006) is a welcome step forward for the management of common land, particularly if it gives further impetus to the reintroduction of grazing on neglected sites with biologically important populations of insects.

Keywords: *Omocestus viridulus*, Orthoptera, heathland restoration, scrub invasion, Essex.

Introduction

Heathland is included in the Essex Biodiversity Action Plan (BAP) due to its local rarity, with only 5.5 ha of *Calluna* heath remaining in the county (Thompson & Maclean, 1999). A recent consultation on Part 2 of the Commons Act (2006), has suggested the creation of statutory 'commons councils' to ensure commoners and landowners work together at a local level to enable effective scrub control (DEFRA, 2008). This may facilitate the restoration of heathland vegetation on commons where succession to woodland has occurred in the last 100 years (Rackham, 1986).

Writtle Forest, in central Essex, is an ancient hunting Forest, where the plains were traditionally used for grazing (Rackham, 1986). These plains, such as Mill Green Common, began to scrub over with Birch *Betula* spp. and Bracken *Pteridium aquilinum* in the 1950s (Smith, 2003). As a consequence, rare insects such as Silver-studded Blue *Plebejus argus* became extinct on the common, and indeed from Essex (Corke, 1997). It is the aim of this paper to document the disappearance of the locally scarce Common Green Grasshopper *Omocestus viridulus* (Orthoptera: Acrididae) from heathland at Mill Green Common in Writtle Forest in Essex and relate this to habitat management at the site.

Methods

Site description

Mill Green Common (OS grid reference: TL 6301) in Essex, south-east England, forms part of the Writtle Forest ancient landscape and much of the common is woodland (approximately 20 ha in area) with relict areas of heathland vegetation and acidic grassland present near to the Cricketers Public House. Mill Green



Plate 9: Fixed point photographs (looking north) at Mill Green Common in 2000 (**top**) and 2008 (**bottom**) illustrating how scrub has encroached onto the northern area of the heathland formerly populated by the Common Green Grasshopper *Omocestus viridulus*. Note how the white house is visible in 2000, but not in 2008. Photograph © T. Gardiner.

Common is a registered common and has been designated a Local Wildlife Site by Essex Wildlife Trust because it possesses relict areas of heathland. There is evidence that the common was once grazed, but this management practice ceased in the early 20th century and much secondary woodland has encroached onto the common. Smith (2003) describes how the common was relatively open in the 1950s, with only a small area of woodland near to the Viper Public House. However, since then approximately 80% of the common has been encroached upon by *Betula* spp., *P. aquilinum*, Gorse *Ulex europaeus* and Oak *Quercus* spp. (Smith, 2003).

The study site is a small area (c. 1 ha) of acidic grassland with patches of heathland vegetation opposite the Cricketers pub. In the late 1970s, an attempt was made to create a cricket pitch in this grassy area and much vegetation cover and soil was removed. This clearance inhibited scrub and *P. aquilinum* encroachment, and may have caused the regeneration of a small area (c. 100 plants; Smith, 2003) of Ling *Calluna vulgaris* in the north-east corner. Clearance of scrub was last undertaken in 2001.

Heathland management and fixed point photography

Since 2001 there has been very little active heathland management at Mill Green Common, and scrub has been uncontrolled. In July 2000, a photograph was taken of the heathland at a fixed point (OS grid reference TL 63816 01266), looking north across the site towards the white house, with the bench and road to the east and the car park to the south of the photographer (**Plate 9**). The comparative image was taken in 2008. An estimate was made of the percentage cover of scrub on the site in 2000 and 2008.

Grasshopper surveys

The Common Green Grasshopper *Omocestus viridulus* (Orthoptera: Acrididae) is a scarce Essex species (Wake, 1997), despite being widespread nationally (Marshall & Haes, 1988). It is generally agreed that the grasshopper is a reliable indicator of unimproved grassland (Marshall & Haes, 1988), and in Essex it is largely restricted to acid grassland and heathland (Wake, 1997). Due to its rarity in the county it has been added to the Essex Red Data List (Gardiner & Harvey, 2004). Mill Green Common was visited on two occasions in 2000 (once in July and August) and 2001, once in June and September 2003 and once in June 2005 and 2008, in suitable weather conditions for locating Orthoptera (> 17°C, sunny). Sweep netting was used to collect Orthoptera on all occasions (Gardiner *et al.*, 2005).

Results

Omocestus viridulus was recorded by both authors in 2000, but was not located in the surveys in 2001, 2003, 2005 or 2008, despite exhaustive searches in all years. It is believed that the grasshopper has disappeared from the heathland due to the recent encroachment of scrub (Plate 9). Indeed, there has been significant tree growth (mainly *U. europaeus* and *Betula* spp.) and *P. aquilinum* on the heathland

(c. 10% scrub cover in 2000, c. 40% in 2008), particularly to the north of the site where there was a large stand of Purple Moor-grass *Molinia caerulea* where *O. viridulus* was found in 2000. *Calluna vulgaris* has declined from > 100 plants (Smith, 2003), to c. 75 in 2008.

Discussion

The scrub encroachment at Mill Green Common is of particular concern as it may have led to the disappearance of the scarce grasshopper, *O. viridulus*, from the heathland. *Omocestus viridulus* is a very sedentary grasshopper, adults moving < 10 m in a week (Southwood & Waloff, 1967), which indicates that it may be particularly affected by a reduction in favourable habitat due to scrub encroachment, being unable to disperse to new sites.

This grasshopper was noted as widespread but local over a large area of Mill Green Common by Wake (1997). However, the authors have not recorded the grasshopper in the Mill Green area since 2000, and it may have disappeared from Writtle Forest altogether. The closely related Woodland Grasshopper *Omocestus rufipes* (also an Essex Red Data List species; Gardiner & Harvey, 2004) was recorded in Writtle Forest in 1974 (its only record in the county), but has not been seen since, perhaps due to the encroachment of *Betula* scrub at its original site leading to a loss of the open areas this grasshopper requires (Marshall & Haes, 1988).

The probable loss of both *Omocestus* grasshoppers from the area highlights how seriously succession to woodland affects insects of open habitats. Indeed, the encroachment of woodland over 80% of Mill Green Common since the 1950s due to the lack of grazing (Smith, 2003) must have led to a severe reduction in heathland habitat, leading to the probable extinction of *O. viridulus* from Writtle Forest. It must be hoped that a small population remains in an isolated patch of habitat unaffected by scrub encroachment; it is possible to overlook populations of rare Orthoptera, particularly when they are at low levels and well camouflaged by cryptic colouration (Harvey & Gardiner, 2006). The remaining colonies of *O. viridulus* in the ancient medieval Forests of Epping and Hatfield now assume greater importance, and both are still grazed extensively by cattle (Rackham, 1986).

The scrub encroachment at Mill Green Common has been due to a lack of management by cutting or grazing. Liley (2005) described how scrub re-invasion on a Dorset heathland after clearance was rapid in the absence of management. On the plots in that study, *P. aquilinum* was dominant 10 years after the initial clearance (mean: 70% cover), whilst *U. europaeus* (mean: 24% cover) and Silver Birch *B. pendula* (mean: 17% cover) were not uncommon. This study at Mill Green Common confirms that re-invasion of scrub can be rapid and devastating for insect populations if little follow up management is undertaken.

Urgent scrub removal is required before the populations of other invertebrates are threatened by the disappearance of the open heathland. Indeed, population densities of grasshoppers at the site (mainly Meadow Grasshopper *Chorthippus*

parallelus) have been found to exceed three adults/m⁻², an abundance that compared favourably with other sites in the Writtle area (Gardiner *et al.*, 2002; 2003). The setting up of commons councils under Part 2 of the Commons Act (2006) will be a welcome step forward for the management of commons with biologically important populations of plants and insects, and may help to reintroduce management to lowland areas where succession to woodland has been severe due to under grazing (DEFRA, 2008).

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First occurrence of Phoridae (Diptera) and live *Harmonia axyridis* (Pallas) (Col.: Coccinellidae) eclosing from the same pupae

Two species of phorid, *Phalacrotophora berolinensis* and *P. fasciata*, are known to parasitise coccinellids in the United Kingdom (Disney et al. 1994, *Entomologist* 113: 28-42). Female phorids lay eggs inside a ladybird pupa or prepupa. These will then hatch into larvae, which devour their host from within, before eclosing from the pupa and pupating themselves. In almost all cases, this results in the death of the host ladybird. There have been a few records of 2-spot ladybirds, *Adalia bipunctata*, surviving this process (Disney et al. 1994, *Entomologist* 113: 28-42; Majerus et al. 2000, *Ent. Rec.* 112: 123-124), but none from other species. The invasive 'harlequin' ladybird, *Harmonia axyridis*, is a relative newcomer to British shores (Majerus et al. 2005, *Entomologist's Monthly Magazine*) and has, until recently, been ignored by phorids. However, this year has seen the harlequin being attacked in significant numbers for the first time (Ware et al. in prep.) and with this has come the discovery that some individuals of *H. axyridis* can also survive parasitisation by these flies.

Of 1,120 harlequin pupae collected over the summer of 2008, two produced both phorids and live *H. axyridis* adults. The two pupae were both collected from birch trees (*Betula* spp.) on Fen Causeway, Cambridge, on 14 June 2008. Two days later (16 June 2008), one larva of *P. fasciata* emerged from each of these pupae. Both larvae pupated and eclosed successfully, and both were male. On 18 June 2008, a live harlequin adult emerged from each pupa. Each ladybird was sexed and weighed and, once dead, they were dissected and the numbers of ovarioles in their ovaries were counted. The details of these are presented in Table 1 below.

Pupa number	Sex	Colour form	Weight	Ovariole number (both ovaries)	Additional notes
H52	—	spectabilis	35.5mg	37	Appeared to have a reduced fat body
H54	—	succinea	36.2mg	36	Appeared to have a reduced fat body

Table 1. Details of adult ladybirds which emerged from phorid-parasitised pupae.

These results were particularly interesting when compared to those of a control sample of unparasitised eclosed harlequins from the same sample of pupae. The average weight of female ladybirds from this control sample was 32.9 mg – not significantly different from these two individuals. However, the total ovariole numbers appeared to be much reduced. Ovarioles are the egg tubes from which the primordial germ-cells develop into fully fledged eggs (oocytes) or nutritive cells (trophocytes) (Majerus 1994, *Ladybirds New Naturalist Series*, number 81, HarperCollins). Total ovariole number will thus have a considerable impact on future reproductive capacity, particularly as some have suggested that the number of eggs in any single clutch produced by a female is limited by the number of ovarioles in the ovary used to lay that clutch (Baungaard & Hämäläinen, 1984. *Ann. Entomol. Fenn.* 47: 25-27; Dixon 2000, *Insect Predator-Prey Dynamics*:

Ladybird Beetles & Biological Control. Cambridge University Press, Cambridge; Stewart et al., 1991a. *Entomophaga* **36**: 329-333; Stewart et al., 1991b. *Funct. Ecol.* **5**: 380-385). Previous measurements have suggested that the maximum total ovariole number for a female *H. axyridis* is around 60 (Ware et al., 2008. *Eur. J. Entomol.* **105**: 437-443), which is almost double the number seen here. Similarly, both individuals appeared to have a much smaller fat body than would normally be seen in newly eclosed ladybirds, even though both were fed aphids for one day after eclosion before being transferred to an artificial diet.

It would appear, then, that some individuals of *H. axyridis* have a degree of immunity to phorid parasitisation. This could also account for the low numbers of phorids which emerged from these two pupae; perhaps more eggs were laid in each host, but failed to develop thereafter. The average number of phorids emerging from *H. axyridis* pupae gathered during the same period was around four, with a maximum of twelve (Ware et al. in prep.). This is slightly lower than the numbers previously reported for a similarly sized ladybird, *Coccinella septempunctata* (Disney et al., 1994. *Entomologist* **113**: 28-42), but this could be attributed to *P. fasciata* still being in the process of adapting to a novel host in Britain. An alternative explanation might be that only one egg was laid by the ovipositing female, hence the drain on the host ladybird's resources was slight enough that it could survive, though not without cost. A reduced fat body could have consequences for its future survival (particularly if aphid prey was scarce) and a lowered total ovariole number might result in a reduction in lifetime reproductive success.

A second, potentially very exciting, consequence of some ladybirds surviving parasitisation by phorids has already been suggested in the literature (Majerus et al., 2000. *Ent. Rec.* **112**: 123-124): the spread of male-killing bacteria. These bacteria, which are inherited in the cytoplasm and hence only through the female line, kill male, but not female, embryo hosts. Different species of coccinellid have been found to contain phylogenetically very similar strains of bacteria, suggesting that some inter-specific horizontal transmission must take place. Until recently, the possibility of phorids acting as a vector had been discarded, as it had been assumed that parasitisation was always fatal for the ladybird host. However, with confirmed cases now in two species, this must be reconsidered. Events such as those described in this report are probably rare, but it is possible that they could result in transmission. In the case of *H. axyridis*, this is particularly interesting, as it harbours a bacterial male-killer (*Spiroplasma* spp.) within its native South-East Asian range (Majerus et al. 1999. *Insect Mol. Bio.* **8**: 551-555) and, although none have yet been identified in the United Kingdom, it does share habitat and overwintering sites with *A. bipunctata*, which is known to carry a male-killing Rickettsia in some populations. As phorids have now been recorded parasitising both species of coccinellid, transmission of bacteria from one to the other has now passed from a hypothesis to a statistical possibility, albeit a small one.— L. J. MICHIE*, R. H. L. DISNEY, R. J. HALL, R. L. WARE, and M. E. N. MAJERUS, *Department of Genetics, University of Cambridge, Downing Street, Cambridge CB2 3EH (E-mail: ljm56@cam.ac.uk).

Some Buckinghamshire micromoths – filling the gaps

Using the distribution maps for micromoths published in the various volumes of the Harley Books series *Moths and Butterflies of Great Britain and Ireland (MBGBI)*, vice county 24, Buckinghamshire, appears to be relatively deficient in species compared with the bordering vice counties. Many of the species missing from VC 24 are species that are relatively common and ought to be present in Buckinghamshire, so their absence from the maps is probably due either to a lack of recording or non-availability of records at the time that the map compilers needed them.

Since the publication of those maps, many of the missing species have now either been recorded in Bucks or else older records have come to light. A few of these have been published in the Microlepidoptera Reviews that have appeared in this journal for almost 30 years, but the proportion is only around 20%.

There are two aims for this article. Firstly, to bring the situation up to date and mention all the micro-moth species not mapped in the volumes of *MBGBI* published to date. The second aim is to encourage recorders so send in records to the author.

The list gives Bradley & Fletcher checklist numbers, current taxon and authority, site where recorded together with Ordnance Survey ten-kilometre grid square reference, date, recorder and any other relevant information. Where there is any doubt about certain aspects, they are followed by a question mark. Recorder and identifiers are indicated by initials as follows:

AME = A. Maitland Emmett, CWP = Colin W. Plant, DVM = David V. Manning, DW = David Wedd. EB = Eric Bradford, EGRW = E. G. R. Waters, GH = George Higgs, IS = Ian Sims, JE = John Ellerton, JL = John Lovell, MCH = Martin C. Harvey, MFVC = Martin F. V. Corley, MJS = Mark J. Sterling, MK = Mike Killeby, MRS = Mark R. Shaw, MTNHS = Middle Thames Natural History Society, MVA = Martin V. Albertini, NF = Neil Fletcher, PRH = Peter R. Hall, PS = Phil Sterling, RJH = R. J. Heckford, TWH = Tony Harman, WAC = Sam Carter. Records that have been mentioned in the annual Microlepidoptera Reviews in this journal are annotated with 'R', followed by the year.

- 3 *Micropterix aureatella* (Scop.) – Black Park TQ08, 19.v.2001 MVA.
- 6 *Eriocrania subpurpurella* (Haw.) – Cadsden SP80, 14.v.1968 MTNHS.
- 7 *Eriocrania chrysolepidella* Zell. – no site, 1988 PS.
- 8 *Eriocrania unimaculella* (Sett.) – R2004 – Rammamer Heath SP92, 17.v.2004 mines DVM.
- 11 *Eriocrania cicatricella* (Sett.) – Burnham Beeches SU98, 24.vi.1993 MVA/PRH, det. EB.
- 20 *Ectoedemia decentella* (H.- S.) – Marlow SU88, 21.vi.1983 DW.
- 21 *Ectoedemia sericepeza* (Zell.) – R2004 – Stony Stratford SP84, 14.viii.2004 MK, det. DVM male genitalia.
- 22 *Ectoedemia louisella* (Sircom) – Stony Stratford SP84, 1.ix.2000 MK, det. DVM.

- 30 *Ectoedemia arcuatella* (H.- S.) – Hambleden SU78, no date IS.
- 35 *Ectoedemia minimella* (Sett.) – Burnham Beeches SU98, 1976 AME.
- 42 *Ectoedemia septembrella* (Stt.) – Yardley Chase SP85, 11.vi.1995 mines DVM.
- 46 *Trifurcula immundella* (Zell.) – Burnham Beeches SU98, 1976 AME.
- 53 *Stigmella splendidissimella* (H.- S.) – Pavis Wood SP90, 25.x.2003 mines CWP.
- 58 *Stigmella ulmariae* (Wocke) – Medmenham SU88, 1997 IS.
- 59 *Stigmella poterii* (Stt.) – R1988 – Ivinghoe SP91, xi.1988 empty mines MJS.
- 64 *Stigmella continuella* (Stt.) – Burnham Beeches SU98, 1976 AME.
- 66 *Stigmella sorbi* (Stt.) – Little Brickhill SP93, 1984? AME.
- 74 *Stigmella assimilella* (Zell.) – Burnham Beeches SU98, 1976 AME.
- 78 *Stigmella incognitella* (H.- S.) – Shabbington Wood SP61, 1922? EGRW.
- 110 *Stigmella betulicola* (Stt.) – R1985 – Shotgrove Country Park (very likely that this should have been Stockgrove SP92), 9.ix.1985 AME.
- 114 *Stigmella glutinosae* (Stt.) – Burnham Beeches SU98, 1976 AME.
- 115 *Stigmella alnetella* (Stt.) – Medmenham SU88, no date IS.
- 119 *Opostega salaciella* (Treitschke) – R2002 – Ballinger 27.vii.2001 PRH, det DVM.
- 121 *Pseudopostega crepusculella* (Zell.) – Hambleden SU78, 17.vii.1998 MVA.
- 129 *Incurvaria pectinea* Haw. – Egypt Woods SU98, iv.1984 WAC.
- 130 *Incurvaria masculella* ([D.& S.]) – Burnham Beeches SU98, 1975 MTNHS.
- 133 *Lampronia capitella* (Clerck) – Marlow SU98, 1980s DW.
- 145 *Nemophora minimella* ([D.& S.]) – Marlow SU98, 1980s DW.
- 152 *Adela rufimitrella* (Scop.) – Burnham SU98, 31.v.1997 MVA.
- 154 *Heliozela sericiella* (Haw.) – Burnham Beeches SU98, 27.iv.1984 WAC, det. DVM.
- 159 *Antispila treitschkiella* (F.v .R.) – Lodge Hill SP70, 29.vii.2002 PRH, det. DVM.
- 180 *Diplodoma laichartingella* (Goeze) – Burnham Beeches SU98, 13.v.1990 case MVA.
- 181 *Taleporia tubulosa* (Retz.) – Marlow SU98, vi.1985 DW.
- 195 *Sterrhopteryx fusca* (Haw.) – Marlow SU98, 1980s? DW.
- 199 *Psychoides verhuella* Bruand – R2004 – Medmenham SU88, v.2004 reared from hart's tongue IS.
- 203 *Infurcitinea argentimaculella* (Stt.) – Medmenham SU88, 1995 IS.
- 217 *Nemapogon wolffiella* Karsholt & Nielsen – R2003 – Stony Stratford SP84, 4.viii.2003 MK, det. DVM.
- 218 *Nemapogon variatella* (Clemens) – R1996 – Burnham Beeches SU98, larva 13.iv.1991 IS.
- 223 *Nemaxera betulinella* (Paykull) – Lane End SU89, 17.vi.1969 JE.
- 253 *Ochsenheimeria vacculella* F.v .R. – R2007 – Stowe Park SP63, 17.vi.2007 MCH.
- 264 *Bedellia somnulentella* (Zell.) – Willen SP84, 15.xi.1996 mines GH, det DVM.
- 273 *Bucculatrix thoracella* (Thunberg) – Willen SP84, 22.vii.2001 GH, det. DVM.
- 284 *Caloptilia rufipennella* (Hb.) – Homefiled Wood SU88, 20.ix.1995 mines IS.
- 285 *Caloptilia azaleella* (Brants) – R1995 – Burnham SU98, 6.v.1995 MVA.
- 289 *Caloptilia falconipennella* (Hb.) – R1994 – Medmenham SU88, 10.x.1994 mines IS.

- 313 *Acrocercops brongniardella* (Fabr.) – Lane End SU89, 1969 MTNHS.
- 315 *Phyllonorycter harrisella* (L.) – R1985, but record predated by – Lane End 20.iii.1969 larva ex oak JE.
- 318 *Phyllonorycter tenerella* (Joannis) – Beaconsfield SU98, 17.vii.1984 WAC.
- 325 *Phyllonorycter mespilella* (Hb.) – Hell Coppice SP61, 4.v.1966 JE.
- 331 *Phyllonorycter lantanella* (Schrink) – Butlers Hanging SU89, 1978 MRS.
- 321a *Phyllonorycter platani* (Stdgr.) – Marlow SU98, 14.vii.1996 mines IS.
- 344 *Phyllonorycter strigulatella* (Lien. & Zell.) – Medmenham SU88, 24.ix.1997 mines IS.
- 354 *Phyllonorycter emberizaepenella* (Bouché) – Burnham SU98, 1996 reared MVA.
- 356 *Phyllonorycter tristrigella* (Haw.) – Beaconsfield SU98, 17.vii.1984 mines WAC.
- 360 *Phyllonorycter kleemannella* (Fabr.) – Stony Stratford SP84, 17.viii.1998 MKdet DVM.
- 366a *Cameraria ohridella* Deschka & Dimic – R2003 – Medmenham SU88, 29.ix.2003 mines and protruding exuvia in horse chestnut leaves IS.
- 389 *Choreutis pariana* (Clerck) College Lake 1997 JL.
- 394 *Glyptipterix forsterella* (Fabr.) – R1988 – Brockhurst Wood, Beaconsfield SU98, 12.vi.1988 MFVC.
- 405 *Argyresthia arceuthina* (Zell.) – Pulpit Hill SP80, 24.v.1988 MVA.
- 407 *Argyresthia dilectella* (Zell.) – Windsor Hill SP80, 1984 MFVC.
- 409a *Argyresthia trifasciata* Stdgr. – R2001 – Stony Stratford SP84, 3.v.2001 MKdet DVM.
- 414 *Argyresthia curvella* (L.) – Hambleton SU78, 8.vii.1998 MVA.
- 416 *Argyresthia glaucinella* Zell. – Ravenstone Copse SP85, 22.iv.1999 DVM.
- 417 *Argyresthia spinosella* Stt. – Salcey Forest SP85, 28.vi.1989 MVA.
- 419 *Argyresthia semifusca* (Haw.) – Burnham Beeches SU98, 24.vi.1989 MVA.
- 426 *Yponomeuta malinellus* Zell. – Shabbington Wood SP61, 1924? EGRW.
- 428 *Yponomeuta rorrella* (Hb.) – Finemere Wood SP72, 22.vii.1989 MVA.
- 430 *Yponomeuta plumbella* ([D.& S.]) – Ivinghoe Hills SP91, 11.viii.1989 MVA.
- 431 *Yponomeuta sedella* (Tr.) – Burnham SU98, 4.viii.1986 MVA.
- 440 *Paraswammerdamia albicapitella* (Scharf.) – Stony Stratford SP84, 16.vii.1998 MK.
- 441 *Paraswammerdamia nebulella* (Goeze) – Pitstone Fen SP91, 1986 MFVC.
- 444 *Ocnerostoma piniariella* Zell. – Pitstone Fen SP91, 1986 MFVC.
- 445 *Ocnerostoma friesei* Svensson – R2003 – Stony Stratford SP84, 8.x.2003 MK, det. DVM by genitalia.
- 447 *Roeslerstammia erxlebella* (Fabr.) – Ballinger SP90, 21.viii.2002 PRH, det. MFVC.
- 451 *Ypsolopha mucronella* (Scop.) – Homefield Wood SU88, 31.v.1991 MVA/PRH.
- 458 *Ypsolopha alpella* ([D.& S.]) – Penn Wood SU99, 25.viii.2001 MVA/PRH.
- 463 *Ypsolopha vittella* (L.) – Willen SP84, 9.vii.1997 GH.
- 476 *Acrolepia autumnitella* Curtis – R2001 – Stony Stratford SP84, 20.x.2001 MK, det. DVM.
- 481 *Epermenia falciformis* (Haw.) – Dancersend SP90, 24.v.1998 PRH.
- 483 *Epermenia chaerophyllea* (Goeze) – Marlow SU98, 1980s ? DW.

- 485 *Schreckensteinia festaliella* (Hb.) – College Wood SP73, 29.vii.2000 MK, det. DVM.
- 494 *Coleophora coracipennella* (Hb.) – R2001 – Willen SP84, 4.vii.2001 GH, det. DVM by genitalia.
- 494a *Coleophora prunifoliae* Doets – Beaconsfield SU98, 13.vi.1959 WAC, det DVM (1999).
- 515 *Coleophora albitalisella* Zell. – Whitecross Green Wood SP61, 22.vi.1996 MVA.
- 516 *Coleophora trifolii* (Curtis) – Homefield Wood SU88, 8.vii.1992 MVA.
- 517 *Coleophora alcyonipennella* (Kollar) – Grangelands SP80, 5.v.1995 MVA.
- 517a *Coleophora frischella* (L.) – Bernwood Meadows SP61, 16.viii.2002 PRH, det. MFVC by genitalia.
- 521 *Coleophora conyzae* Zell. – Cadsden SP80, 5.viii.1968 JE.
- 530 *Coleophora lixella* Zell. – Cadsden SP80, 5.vii.1969 JE.
- 532 *Coleophora albidella* ([D.& S.]) – Notamore Copse SP74, 24.vi.2000 case, reared MVA, imago checked DVM.
- 536 *Coleophora betulella* (Hein.) – Hell Coppice SP61, 1928 EGRW.
- 544 *Coleophora albicosta* (Haw.) – Burnham Beeches SU98, 2.v.1990 MVA.
- 566 *Coleophora sternipennella* (Sett.) – R2000 – Stony Stratford SP84, 13.vii.2000 MK, det. DVM.
- 577 *Coleophora artemisicolella* Bruand – R1997 – Burnham Beeches SU98, 18.x.1997 one case IS.
- 602 *Elachista apicipunctella* Stt. – Stony Stratford SP84, 22.iv.2000 MK, det. DVM.
- 620 *Elachista gangabella* Zell. – College Lake SP91, 1999 JL, det. DVM.
- 631 *Cosmiotes freyerella* (Hb.) – Stony Stratford SP84, 30.vii.1998 MK, det. DVM.
- 632 *Cosmiotes consortella* (Stt.) – College Lake SP91, 1999 JL, det. DVM.
- 651 *Oecophora bractella* (L.) – Turville Heath SU79, 26.vi.2006 TWH.
- 671 *Depressaria ultimella* Stt. – R2001 – Stony Stratford SP84, 27.v.2001 MK, det. DVM by genitalia.
- 674 *Depressaria badiella* (Hb.) – R2006 – Baccombe Warren SP80, 26.viii.2006 MVA/PRH, det. DVM by genitalia.
- 676 *Depressaria pulcherrimella* Stt. – Dancers End SP90, 25.viii.2008 PRH. Male by genitalia.
- 682 *Depressaria chaerophylli* Zell. – R2002 – Stony Stratford SP84, 23.iv.2002 MK, det. DVM.
- 728 *Monochroa cytisella* (Curtis) – Ivinghoe Hills SP91, 15.vi.1990 MVA/PRH.
- 732 *Eulamprotes unicolorella* (Dup.) – Lodge Hill SP70, 23.v.1999 MVA, Det. DVM by genitalia.
- 736 *Monochroa lucidella* (Steph.) – R2003 – Stony Stratford SP84, 9.vii.2003 MK, det. DVM by genitalia.
- 741 *Monochroa suffusella* (Douglas) – R2001 – Stony Stratford SP84, 1.vii.2001 MK, det. DVM by genitalia.
- 770 *Carpatolechia proximella* (Hb.) – Stony Stratford SP84, 30.v.2001 MK, det. DVM.
- 771 *Carpatolechia alburnella* (Zell.) R2001 – Willen SP84, 23.vii.2001 GH, det DVM.
- 776 *Teleiopsis diffinis* (Haw.) – R2007 – Langley Park TQ08, 26.v.2007 MCH. Date given in 2007 Micro Review is incorrect.

- 801a *Gelechia senticetella* (Stdgr.) – R801a – Slough SU98?, 5.iv.2003 lava on Thuja reared RJH.
- 802a *Gelechia sororculella* (Hb.) – Finemere Wood SP72, 14.viii.2002 MVA, det. MFVC by male genitalia.
- 830 *Caryocolum fraternella* (Douglas) – Grendon Wood SP62, 28.viii.2006 MVA/PRH by genitalia.
- 840 *Thiotricha subocellea* (Stephens) – Holtspur Bottom SU99, 4.vii.2008 PRH by female genitalia.
- 849 *Syncopacma cinctella* (Cl.) – Pitstone Fen SP71, 26.vi.1983 MVA/PRH, det. DVM by genitalia.
- 855 *Acompsia cinerella* (Clerck) – Hambleden Estate SU78, 7.viii.1998 MVA/PRH, det. DVM by genitalia.
- 891 *Mompha sturnipennella* (Treitschke) – Walter's Ash SU89, 18.iii.2008 NF, det. PRH by female genitalia.
- 894 *Cosmopterix zieglerella* (Hb.) – Burnham 5.x.2003 SU98, mines in hop leaves MVA.
- 903 *Chrysoclista linneella* (Cl.) – R2003 – Willen SP84, 4.viii.2003 GH, det. DVM.
- 906 *Blastodacna atra* (Haw.) – Stony Stratford SP84, 9 & 15.vii.2002 MK, det. DVM.
- 915 *Scythris picaepennis* (Haw.) – Grangelands SP80, 6.vii.2004 MVA, det. MFVC by genitalia.
- 918 *Scythris limbella* (Fabr.) – R2003 – Stony Stratford SP84, SP84, 7.viii.2003 MK, det. DVM.

My thanks go to all the people mentioned above who have recorded micromoths in Buckinghamshire. Particular thanks go to those who have helped with identification, especially Martin Corley and David Manning who have carried out many identifications over the last 10 years or more. In addition David Manning and George and Frances Higgs deserve thanks for compiling a Bucks micromoth list in 1998 from the records formerly held by the late Maitland Emmet for the *MBGBI* maps. This formed the basis from which the gaps in records were gradually eliminated. Also playing a significant part was data gathered by Sam Carter, which unfortunately he was not able to publish prior to his death, and thanks go to his family for passing this on to me. John Langmaid provided much helpful information and advice.— MARTIN ALBERTINI, Bucks Moth Recorder, 11 Hargrave Road, Maidenhead SL6 6JR. (malbertini@onetel.com).

Hazards of butterfly collecting. A nostalgic day on Mount Hermon, Antilebanon, May, 2008

When driving from Beirut towards Damascus on the main highway, you begin to descend steeply towards the Beqa'a Valley from the Dahr al Baydar pass at 1,500m. Just after the pass you are treated to a stupendous panorama. Five hundred metres below lies the flat, fertile plain of Beqa'a with its patchwork quilt of fields, containing an amazing variety of crops (almonds, chick-peas, vines, aubergines, tomatoes, peaches, broad-beans, cucumbers, etc, and even the odd bit of hashish). Beyond the valley stretches the Antilebanon from north to south, Damascus only just hiding just east of its lowest point. During winter the mountains are mostly crowned with snow, which melts in summer, though small patches may remain in shady areas of its highest point, Mount Hermon (2,800m), at the southernmost point of the range: in early spring its enormous snow-cap emphasizes how much taller it is than the rest of the Antilebanon.

When I was working on my book, *Butterflies of Lebanon* from 1970 to 1974 Mount Hermon was a frustrating promised land beyond reach. Only Mary de la Beche Nicholl had been there for a few days back in 1900 or 1901, and she had caught some interesting butterflies. But it was strictly off-limits. The mountain was shared between Lebanon and Syria. The Syrian part had been occupied by Israel during the Six-Day War in 1967, and still is. The Lebanese part had been appropriated by an alphabet soup of acronyms for Palestinian resistance and liberation fronts, nominally coordinated by the Palestine Liberation Organization (PLO). Various accords between the Lebanese Government and the PLO permitted the Lebanese Army to have a few observation posts so that the illusion of Lebanese sovereignty was maintained. My boss was Palestinian with good contacts at higher levels in the PLO; he tried to get me permission to go butterfly collecting, predictably without luck: "They thought this was the funniest request they had ever had!"

Most of the Antilebanon was not accessible by roads that could be conquered by my orange VW Beetle. They needed a 4x4 or a camping trek, which my finances, time, and travel schedules did not permit. Just one suitable road existed, leading from Baalbek up towards Bloudan in Syria. I went along this road to the shrine at Nabi Sbat for the first time in August 1972 and found a species that was probably new to science. My return visit to secure material for a chromosome count in July the following year led to my being captured at gunpoint several times by Palestinian fighters (see story in this journal: 1989. vol. 101: 232-233). The new species was duly described as *Agrodiaetus deebi* Larsen, 1974 and has since been found also in the Syrian Antilebanon. I left Lebanon in 1975. My greatest regret was never having managed to visit Mount Hermon. In 1977 I spent six weeks researching the butterflies of Jordan, followed by a week's sentimental journey to Lebanon during a brief pause in the civil war. I moved on to researching Yemen and Oman, then since 1987 concentrating mostly on African butterflies, almost wholly forgetting Lebanon and the Middle East.

In 2008, I was invited by Dubi Benyamini, the grand old man of Israeli butterflies, to give a talk at the 25th Anniversary Conference of the Israeli Lepidopterists Society in Jerusalem. Dubi is an old friend ... we corresponded through a "dead-letter drop" in Helsinki while I was still in Lebanon. As part of the programme, a trip to the highest parts of Israeli-occupied Mount Hermon was planned. So, more than 30 years since I last looked at Mount Hermon from Dahr al Baydar, I was finally to set foot there. During this time the vibrant Israeli entomological community had thoroughly researched "their" part of the Hermon: many interesting butterflies had been found, though rather fewer than I had envisaged when last surveying the mountain so long ago. However, the Israeli side is only about 2,100 m, or some 700 m lower than the summit within Lebanon.

On 31 May 2008 some 25 people assembled at the parking lot on Mount Hermon, which is at the 1,600 m level, collecting butterflies there till the morning chill decreased. This area is at the foot of a complex of ski-lifts, restaurants, and discos that make the Hermon rather more accessible than it was in 1975. Many butterflies were present, but we were evidently still below the true montane zone. Then we took the ski-lift to ascend to 2,000 m. Before that I was forced to don a floppy hat (nicely emblazoned with the logo of the Israeli Lepidopterists Society) to protect against the sun at 2,000 m. In 1964, when I left the Danish army after having worn a hat of some description every day for two years, I had sworn never again to wear one, and for more than 40 years I had not. But with 25 people insisting that NOT wearing a hat was unsafe, I had to submit (only for about an hour, but still – group-pressure can be a terrible thing!).

Butterfly nets were in short supply ... but there must have been fifty thousand dollars worth of very expensive cameras and even more expensive macro-lenses. I wanted to barcode the butterflies of Hermon, so I enlisted two young girls who did have nets to help me. I explained the purpose and procedures. "Come on", said one of the mothers, "kids that age never listen to adults!" Butterflies were everywhere, including many rare species. During the day I saw more *Colias libanotica* Lederer than I saw during five years in Lebanon: both sexes are easily told from the common *Colias crocea* Fourcroy in flight. I was pleased to see *Polyommatus juno* Hemming, 1933 again; I wrote a paper long ago where I argued it should be considered distinct from *P. icarus* Rottemburg, which molecular studies have now substantiated. *Parnassius mnemosyne sheljuzhkoi* Bryk, 1914 was common: I used to call it *syra* Verity, 1908, but that is taking the concept of subspecies much too far. The girls continued to bring specimens for barcoding, so I did not have to think about that. Tony Pittaway found a branch of a tree where more than a dozen *Nymphalis polychloros* L. had left their larval skins. I never saw any in Lebanon, just having a few old records. I learnt that they were quite common on Mount Hermon a bit later in the year; they have also been recorded as quite common above the Ammiq Swamps (below the Cedars of Barouk in the Lebanon), which I had visited on numerous occasions. This species seems to have had a strong cyclical resurgence. There was much to discuss all day, and always someone knowledgeable to discuss it with close by.



Barcodeing heroines of Mount Hermon – Jasmine Schwartz-Tzachor & May Soroker.

During the day a total of 44 species were recorded ... most of them with clear photographic evidence. In my African rainforests a daily total of less than 120 species is rather disappointing, but in the Palaearctic area 44 is a lot. In 1956 my late friend, Ted Wiltshire, published a paper entitled "My highest butterfly catch of a single day in the Middle East" (*Journal of the Lepidopterists Society*, 10(3/4):116-119) where he found 31 species on the Kuh Barfi Mountain near Shiraz in southwestern Iran in early May: adding data from two other days on successive years the total for this mountain (6,000 – 9,000 feet) became 46, or almost the same as our total on the Hermon. (had we also stopped at 1,300 m, we would have surpassed this total).

We were having spirited discussions till just before the last ski-lifts left. One of the barcodeers' mothers told me she had asked her daughter to show her the butterflies she had caught, only to be told: "No ... I can't show them to you before Torben has seen them!" Barcodeers one – mothers nil!! They had even caught the only *Erynnis marloyi* Boisduval on the entire trip – a rare butterfly, not easily caught.

I did manage to leave a memento on the Hermon. When we rushed over to catch the very last of the lifts, I forgot my butterfly net in the haste. I hope it has now been put up as a worthy memorial to a splendid day.— TORBEN B. LARSEN, Jacobys alle 2, 1806 Frederiksberg C, Denmark (E-mail: torbenlarsen@btinternet.com).

First occurrence of *Rhyzobius chrysomeloides* (Herbst) (Col.: Coccinellidae) in Cambridgeshire

On 30 July 2008, during a general coccinellid survey at the Cambridge City Cemetery (O.S. grid reference TL 483594) a small coccinellid, which superficially resembled the grass-dwelling *Rhyzobius litura* (Fabricius), was found. The beetle was beaten from a lime tree (*Tilia × europaea*). As this is not a usual habitat for *R. litura*, which is associated with low-growing herbage, the beetle was retained for identification. Two *Rhyzobius* species are currently known to be established in Great Britain; the widespread and common *Rhyzobius litura*, and the lesser-known *Rhyzobius chrysomeloides*. Illustrations in Le Monnier and Livory (2003, *Atlas des coccinelles de la Manche*. Manche Nature, France), depict the elytral patterns of the two species, with *R. litura* being the less well-marked of the two, showing at most a single black horseshoe-shaped mark. *R. chrysomeloides* specimens show a much wider range of elytral patterns, but typically the extent of the black markings is much greater. Our specimen showed a clear horseshoe-shaped pattern on the elytra, within which were two black lines, one running vertically down each elytron. Further examination of the genitalia and the chalazae in the middle of the rear margin of the pronotum (*R. chrysomeloides* has a single row of chalazae, while *R. litura* has two rows) confirmed the identification as *R. chrysomeloides*, the first record for Cambridgeshire.

Rhyzobius chrysomeloides was first recorded in Great Britain in 1996 (Hawkins 2001, *British Journal of Entomology and Natural History* 13: 193-195) and its distribution remains poorly known. Only 15 records of the species exist in the National Biodiversity Network database, all from the south of England, with the majority of sightings from Surrey and Southampton. The only additional British records of which we are aware came from Evesham, Worcestershire in 2005 (Whitehead 2007, *Entomologist's Monthly Magazine* 143: 7-10) and Liverpool in 2006 (Whitehead 2008, *Entomologist's Monthly Magazine* 144: 68). In north-west France the species is found on a variety of deciduous and coniferous trees (Le Monnier and Livory, *op. cit.*) and in Britain it has been recorded on ivy, hawthorn, pines, and ornamental shrubs (Hawkins 2000, *Ladybirds of Surrey*. Surrey Wildlife Trust). The paucity of data makes it impossible to speculate on whether *R. chrysomeloides* is expanding northwards following a natural colonisation, or has been introduced at several locations on imported plants. However, increased awareness of the species' presence would help to elucidate the current distribution. It seems that any well-marked *Rhyzobius* found on trees or shrubs would be worthy of closer inspection; further notes on their identification can be found in Hawkins (2000, *op. cit.*) and Whitehead (2007, *op. cit.*).— RICHARD HALL¹, REMY WARE¹, LAURA JANE MICHEL¹, PETER BROWN² and MICHAEL MAJERUS* (*Department of Genetics, University of Cambridge, Downing Street, Cambridge CB2 3EH; ²Department of Life Sciences, Anglia Ruskin University, East Road, Cambridge CB1 1PT; deceased January 2009 (Corresponding e-mail: dr.richard.hall@gmail.com).

A NOTE ON THE LARVA, FOODPLANTS AND A HYMENOPTEROUS PARASITOID OF *NOMOPHILA NOCTUELLA* ([DENIS & SCHIFFERMÜLLER], 1775) (LEP.: PYRALIDAE)

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Abstract

An account is given of the larvae of *Nomophila noctuella* ([D. & S.]) (Lep.: Pyralidae) in the wild in the British Isles and their foodplants as well as the rearing of the hymenopterous parasitoid *Meteorus cinctellus* (Spinola) (Braconidae: Meteorinae), together with a review of prior records and foodplants.

Key words: Britain, Lepidoptera, Pyralidae, *Nomophila*, Hymenoptera, Braconidae, Meteorinae, *Meteorus*.

Introduction

This paper was prompted by our chancing upon larvae of *Nomophila noctuella* in September 2006 and then being unable to trace any published record of the larva being found in the British Isles. As a consequence we discovered that the foodplants given in the British literature are probably derived partly from publications of over 100 years ago about the foodplants accepted by larvae reared from ova laid in captivity in the British Isles and partly from observations made in the wild in North America. At the time of those accounts *Nomophila noctuella* was believed to be a species with a worldwide distribution but Munroe (1973: 177-216) showed it was a species complex represented in North America by *N. nearctica* Munroe 1973. Nevertheless we consider that the North American observations on the larva are of interest because, unsurprisingly for such a closely related species, some are very similar to ours. As the species is usually a common and sometimes abundant immigrant to the British Isles it is understandable that there is little incentive to look for larvae, which probably accounts for the lack of published records. Two apparently previously unpublished foodplants are given, the behaviour of larvae making tunnels in the soil is noted and a hymenopterous parasitoid is recorded.

Prior Records

In the summer of 1877 Porritt (1877: 160-161) caught a female *Nomophila noctuella*, then *Stenopteryx hybridalis* (Hübner, 1796), which laid ova in a container. Only a few years earlier in 1859 Stainton had said that the larva was unknown (1859: 155). Because Porritt did not know what the foodplant(s) might be, he offered the resulting larvae what he called 'various low plants' and says that they showed a preference for *Polygonum aviculare* L. He gives a detailed description of the final instar, which in summary is that the head varies from

reddish brown to dark sienna brown, more or less marbled black, the prothoracic plate is the same colour as the body, sometimes a little browner, the body is warm olive-drab with a dark olive-drab dorsal line bordered pale drab and the ventral surface semi-translucent dark olive-green, with large round, black pinacula and a pale whitish wavy stripe below the black spiracles. He provides an account of their behaviour, noting that they were the liveliest creatures that he had ever seen, and comments that the larvae were very pugnacious and if two came into contact they immediately 'showed fight and bit each other unmercifully.'

Ragonot (1880: 271-272), in a paper entitled 'Notes on unknown or little-known larvae of Micro-Lepidoptera', refers to Porritt's note and says that because the larvae were reared from ova their habits and mode of feeding in the wild were yet to be described. That appears to be the position in the British literature until now, although we know that Dr B. P. Henwood has found larvae under a light trap on a lawn and Dr P. H. Sterling has found larvae inside a light trap and reared them on *Trifolium repens* L., and no doubt others have unpublished records.

Ragonot reports that Monsieur Constant reared the species from larvae found under stones, where presumably the larvae fed on low plants, and that Monsieur Cuny y Martorell says that the larva feeds on *Polygonum aviculare*. Ragonot notes that 'this is just the plant with which Mr. Porritt fed his larvae', which suggests that Monsieur Cuny y Martorell's statement was based on his own observations and not on Porritt's note.

Barrett (1904: 264-267), under *Nomophila hybridalis*, gives an almost verbatim account of Porritt's note and says that the larva, which he also calls little-known, feeds on 'clover [*Trifolium* spp.], grass [Gramineae] and knotgrass [*Polygonum aviculare*], and probably other low-growing plants'. He refers to some interesting observations by Felt (1893: 129-134) on the larva in North America, although presumably the species involved is what is now known as *N. nearctica*, and includes a coloured drawing of the larva (1904: plate 405, fig. 5c) which is based on an uncoloured drawing in Felt (1893: 130, fig. 1b). The larva illustrated by Barrett has a black head, a prothoracic plate with two black sub-rectangular marks, and a pale brown body with black pinacula. Felt says that the young larva has a brownish head and straw coloured body but that the head and tubercles (pinacula) darken later and in the last stages they are black. He also says that in the final instar the prothoracic plate is black and the dorsal surface of the body is pale green.

Felt found larvae among grass and clover and says that they lived almost wholly on clover leaves, eating the soft parenchyma and leaving the veins. He commented that they would eat grass if clover was not in reach and he once observed a larva seize and devour an aphid, even though there was plenty of available foodplant.

He gives a detailed account of how the larvae build what he calls 'nests' at the axils of leaves within which to hibernate. He says that when fully fed the larvae

assemble under chips or stones to pupate, but when there was dried cow dung available that seemed to be a favourite place, and that once 10 pupae were taken from a piece of this which was a quarter of the size of a man's hand.

Thus, Barrett's citation of clover and grass as foodplants was almost certainly derived from Felt and *Polygonum aviculare* came from what Porritt gave his larvae, and so hitherto there appears to have been no published account of what the larva feeds on in the wild in the British Isles.

Subsequent to Barrett one or more of the following foodplants have been given in the British literature: *Polygonum aviculare*, *Trifolium* spp. and Gramineae (Meyrick, [1928]: 427; Beirne, 1954: 136-137, who says that the larva probably also feeds on a variety of other grasses and small plants; Goater, 1986: 87; Emmet, 1988: 220; Emmet, 1991: 174-175 and Bradley, 2000: 45). We assume that the foodplants noted are not based on personal observations but are derived from Porritt and Barrett, even though they are not acknowledged in any of these publications.

Observations

On 24 and 29 September 2006 we found six larvae in a field in south Devon (VC3). Four of these larvae were associated with *Plantago major* L.: one in a short silk-lined tunnel, not much longer than the larva, in the soil with some silken strands leading to the underside of the basal leaves of the plant; one similar, but empty, silk-lined tunnel with silken strands leading to the basal-leaves of another plant with a larva under one of the leaves; and two larvae under basal leaves but without apparent associated silk-lined tunnels. Our attention was drawn to these plants, which were growing on compacted bare soil, because some of the leaves had slightly brown 'windows' in them where the larvae had eaten the under surface, but not through to the upper surface. Two other larvae were found amongst the basal leaves of *Prunella vulgaris* L. which was not growing on bare soil but amongst other low-growing plants. These leaves did not have 'windows'.

Although we had not seen the larva of *Nomophila noctuella* before, we were fairly confident that these were that species because their appearance and active behaviour matched Porritt's description, although the body colour was brown with no hint of olive, or any shade of green. One *N. noctuella* emerged on 8 November 2006, thus confirming our provisional determination.

After finding these larvae we came across a North American article by Johnson & Duffield (1961: 1258-1259) on the larva of what was then called *N. noctuella*, but presumably what is now *N. nearctica*. They record damage in a nursery to seedlings of Douglas Fir, *Pseudotsuga menziesii* (Mirbel) Franco. They state that the larvae clipped the seedlings one quarter to three quarters of an inch above ground level and although some of the needles might be consumed where severed most were dragged into tunnels in the soil 1 to 2 inches deep which were often lined with needles from the seedlings interwoven with silk; this observation is illustrated by a schematic drawing (1961: 1259, fig. 1). They note that the larva

proceeds from the tunnel leaving a trail of silk along its path. They comment that the larva is a rather general feeder, having been recorded from a number of agricultural crops and wild herbs. One of the references they cite is entitled '*Nomophila noctuella* as a grass and alfalfa [*Medicago sativa* L.] pest in Kansas.' They also say that the 'mature' larva is grey-green with numerous dark spots on each segment and a black thoracic plate and head capsule.

Although the tunnels which we found were neither as long nor as deep as those Johnson & Duffield describe and only two of the larvae were associated with tunnels, nevertheless it is clear that *N. noctuella* will make these and that larvae should be searched for both on or under the potential foodplants and in the soil nearby.

It is unsurprising that we found larvae feeding on two plants not mentioned in the British literature because no doubt *N. noctuella*, like *N. nearctica*, is a polyphagous species which feeds on a wide range of low growing plants. In view of the experience in North America, in years of abundance larvae of *N. noctuella* might have a minor economic impact if they feed on seedlings or low-growing agricultural crops.

It is outside the scope of this paper to investigate whether the larvae of *N. noctuella* and *N. nearctica* differ in body colour, at least in their later instars, but we note that the body colour of the larvae described by Porritt as warm olive-drab and those found by us were brown, whereas Felt says that the dorsum of the final instar is pale green and Johnson & Duffield give the body colour as grey-green.

Hymenopterous parasitoids reared from larvae of *Nomophila noctuella*

In view of Porritt's description of the larvae as pugnacious, each was kept in a separate container. RJH had three larvae and between 3 and 5 October 2006 each had a hymenopterous parasitoid larva emerge from the lateral area of the posterior abdominal segments resulting in a comparatively large gaping hole in the abdomen. Contrary to RJH's prior experience of the effect such emergence of a hymenopterous parasitoid larva usually has on the host, death did not immediately follow; instead each larva remained alive for several hours, often still able to move although more feebly than before. The parasitoid larvae immediately spun pale brown ovoid cocoons and three female *Meteorus cinctellus* (Spinola) (Braconidae: Meteorinae) emerged between 18 and 21 October 2006. SDB also had a female of the same species emerge by 24 October. Although this is a widespread species there are not many host records in the British Isles.

Acknowledgements

We are very grateful to Dr B. P. Henwood (Abbotskerswell) and Dr P. H. Sterling (Weymouth) for allowing us to refer to their unpublished larval records, Dr M. R. Shaw (National Museums of Scotland, Edinburgh) for identifying the parasitoids and providing information about them and Mr M. R. Honey (The Natural History Museum, London) for photocopying certain papers.

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By Rail: There are services to Cambridge from King's Cross and Liverpool Street railway stations in London. There are one or two trains each hour from both stations, the faster of which takes just under an hour. Cambridge railway station is about 1 mile from the Department. Buses run regularly from the railway station to the centre of town.

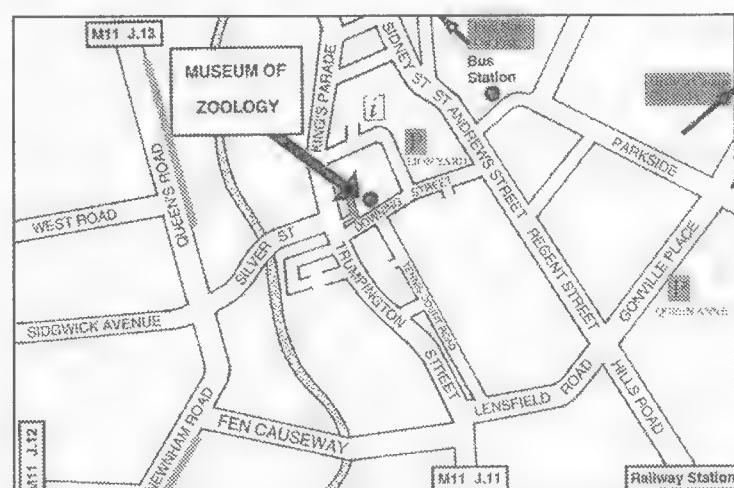
By Coach: Hourly services from London (Victoria) to Cambridge, arriving on Parkside, are provided by National Express (telephone: 08705 80 80 80). There are also services from Heathrow and Gatwick airports.

By Road: Cambridge is well served by several major roads, the M11, the A1(M) and the A14 making it easily accessible from all parts of the UK.

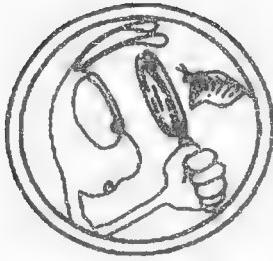
The simplest way into Cambridge is to join the M11: Leave the M11 at junction 12 and turn right onto Barton Road, following it to the City Centre. Turn right at first roundabout (Shell garage) where Barton Road meets Fen Causeway. Turn left onto Trumpington Street at the mini-roundabout, and continue past the Fitzwilliam Museum on your left. Turn right into Pembroke Street, which becomes Downing Street. The Zoology Department is on the left just before the junction with Corn Exchange Street and the Crowne Plaza Hotel.

Car Parking: There is no parking available on the New Museums Site where Zoology is located, but you can park in the Lion Yard car park adjacent to Zoology in Corn Exchange Street. If this is full, follow signs for St. Anne's Terrace car park, about half a kilometre away. Short term Pay and Display parking is available on streets. The car parks at the Grafton Centre and Park Street are both fairly central.

There is an excellent park and ride scheme located on the main routes into the city centre. See the Cambridge City Council website (www.cambridge.gov.uk/services/carparks.htm) for more details on locations and rates.



More detailed location and travel information is provided on the Zoology Department website:
www.zoo.cam.ac.uk/zooone/department/map.html



AES Events Calendar 2009



Please see the AES website for full and up to date listings of AES and other events.
Except for the Worcestershire Entomology Day in November all AES events are free to members and their guests.

For further details please contact the AES Secretary via the PO Box or via email (secretary@amentsoc.org)

Saturday 18th April:

AES Members' Day & AGM

Department of Zoology, University of Cambridge.

For details please see separate announcement.

Saturday 9th May:

Conch Soc Field meeting, Lower Smite Farm, Worcester.

Leader: Harry Green Tel: 01386 710377, Email harrygreen_worcs@yahoo.co.uk

Meet at the farm, grid ref. SO 889590, at 10.30 am.

This is a joint meeting with our affiliates the Conchological Society.

The farmhouse and buildings at Lower Smite Farm form the headquarters of the Worcestershire Wildlife Trust which also farms the surrounding 125 acres in an environmentally friendly fashion. The farm is a mixture of pasture and arable with a series of hedges, ditches and ponds. Although some agrichemicals have been used the farm has escaped intensive cultivation. Molluscicides have not been used. The plan for the day is to sample a series of sites throughout the farm to give a picture of the molluscs of a fairly ordinary patch of central Worcestershire: a change from ancient woods and limestone grasslands.

Lower Smite Farm lies just north of Worcester near junction 6 on the M5 motorway. From the roundabout over the M5 follow the A 4538 NW (signposted Droitwich) for about a mile. Brown signs to Lower Smite Farm with the Wildlife Trust's badger logo are situated on the SW side of the road indicating a turn on the opposite side of the road. Follow this minor road for about 400 metres to the farm buildings on the left labelled Worcestershire Wildlife Trust. Enter and park! Bring suitable outdoor clothing for a country walk, and lunch.

Friday 15th May:

Moths by Moonlight

Museum in the Park, Stratford Park, Stroud, Gloucestershire GL5 4AF.

6.45 – 10pm.

Part of Stroud District Council's 'museums at night' programme, this event will be held at the museum in the park, where AES Member Mike McCrea will run a mercury vapour trap and carry out some 'sugaring'. View the old collections of moths and butterflies from Stroud museum, which hold original specimens of Large Blue caught in the Cotswolds during the 1940s and 50s. Refreshments available, and an opportunity to walk around the park museum free of charge. Stratford Park is a beautiful site with an arboretum, lake and ancient woodland.

Saturday 23rd May:

AES & Bug Club Visit to Horniman Museum and Gardens, London.

10:45 am: Arrival and welcome - meet at the Information Desk at the main entrance to the museum.

11.00am: A-Maze-ing woodlice. An interactive session building mazes to investigate alternating behaviour in woodlice.

12.30-1.30: Lunch. Please bring a packed lunch. A room has been booked for us to use exclusively.

1.30-2.00: Meet the expert. Jo Hatton, Keeper of Natural History, will be introducing you to the Horniman beetle and other interesting beetles from the Horniman collection not on public display.

2.00-3.00: Bug Hunt Challenge. How many different bugs can you and your team identify in the museum gardens within one hour?

The museum has a new Nature Base which includes lots of interesting specimens for us to look at, including real, live Horniman beetles.

Contingency arrangements have been made for the afternoon in case of very bad weather (including a competition to build a giant bug out of recycled materials and rubbish for those who want to).

Please note: if arriving by car, please find street parking nearby as there is no parking at the museum.

Please let the AES secretary know if you plan to attend – secretary@amentsoc.org.

Sunday 7th June:

Open Day at Droitwich Community Woods.

From 2:00 pm.

Activities for children and adults, including bug hunts and guided tours of parts of the reserve. The reserve is situated on the Ombersley Road out of Droitwich Spa at SO626882.

Tuesday 16th June:**De La Beche Room, Natural History Museum, London SW7**6:00 – 8:00 pm but meet up at 5:30 to ensure access to the Museum.**'Entomology' – Introduced by Professor Maurice Moss.**

This is a Joint 'Gossip' Meeting with our affiliate the Quekett Microscopical Club.

You can bring insects with you, live or dead. Various microscopes will be provided.

Saturday 20th June:**AES Conservation Project: AES & Bug Club Field Trip to Bersted Brooks, Rowan Way, Bognor Regis, West Sussex.**

Starting at 11.00 a.m.

This is a return visit to this site, which was designated as a public open space a few years ago, previously being agricultural land. The site is managed by the Friends of Bersted Brooks and Arun District Council. The aim of the visit is to expand the list of invertebrate records. Our previous visit in August 2005 resulted in the first UK record of the picture-winged fly *Tephritis divisa*.

There is a small car park at the site, but a much larger free car park on the opposite side of Rowan Way serving various retail outlets such as Halfords. The entrance to the site is a few metres down Rowan Way off the A29, on the outskirts of Bognor Regis.

Saturday 27th June:**Horsenden Hill, Perivale, Middlesex.**

Meet at Horsenden Farm (TQ163840) 10.00 a.m.

A butterfly walk on Horsenden Hill to see the White-letter hairstreak, and examination of moth trap contents from the previous night. Leaders: Andy Culshaw & David Howdon.

Contact: David Howdon (davidhowdon@yahoo.co.uk), 020 8426 6621

This is a joint event with Butterfly Conservation and the London Natural History Society. **Please note that due to expected high numbers this event is restricted to AES members and our partner organisations only.****Thursday 27th August:****AES & Bug Club visit to the World Museum Liverpool**

William Brown Street, Liverpool, L3 8EN. 11:00 - 4:00

This visit will involve a tour of the museum's extensive insect collections and a guided visit to the Bughouse and the Clore Natural History Centre. This AES event is also open to members of local entomological and natural history societies and their guests. *Please let the AES secretary know if you plan to attend – secretary@amentsoc.org.***Sunday 23rd August (provisional date):****Osterley Park BioBlitz**

This will involve a weekend survey of ancient grassland and woodland at Osterley Park, including examining the contents of the moth traps left out the previous night.

12th September:**Oxford University Museum of Natural History**

Parks Road, Oxford OX1 3PW. 11:00 – 4:00.

Full details of this event will be provided closer to the date.

*Please let the AES secretary know if you plan to attend – secretary@amentsoc.org.***Saturday 17th October:****Annual Exhibition & Insect Fair, Kempton Park Middlesex**

The UK's premier entomological fair.

Saturday 7th November:**Worcestershire Entomology Day**A day of talks and displays organised by Wyre Forest Study Group. This year the event will focus on changes in the insect fauna of the county resulting mainly from climate change. Prebooking is advised – **please note there is a charge of £8 for this event!** The meeting will be held at Heightington village hall at SO764711. If you would like to attend please contact Geoff Trevis (AES Conservation Representative for Worcestershire) on 01905 774952 or by e-mail at geoff.trevis@btinternet.com

AES Publications

Amateur
Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

£ 11.45

Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988) £ 3.10

Members price £ 2.35

A Coleopterist's Handbook

Edited by J.Cooter & M.V.L.Barclay The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

£ 54.00

Members price £ 39.00

Host plants of British Beetles: A List of Recorded Associations

A list of a wide range of plants, in alphabetical order, together with the beetle species that have been recorded as being associated with them. 24 pages (1992) £ 3.10

Members price £ 2.35

A Silkmoth Rearer's Handbook by B.O.C. Gardiner

SPECIAL OFFER PRICE £ 7.70

No further discounted price available

A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996)

£ 14.20

Members price £ 10.60

Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980)

£ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003)

£ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982)

£ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001)

£ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and describe them. 422 pages. Hardback. (Reprinted 1994).

£ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996)

£ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999)

£ 18.90

Members price £ 14.10

Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition – 2001)

£ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003)

£ 7.40

Members price £ 5.45

The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival.

£ 11.90

Members price £ 8.90

Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951)

£ 1.05

Members price £ 0.90

A Label List of European Butterflies

20 pages. (Revised 1981)

£ 2.35

Members price £ 1.85

Some British Moths Reviewed

Aid to the identification of some of the more difficult species. Reprinted from the *Amateur Entomologist* Vol. 5 (1941) and a *Guide to the Critical Species of Lepidoptera*, reprinted from *Entomologists' Gazette* 1969-72. 64 pages, 6 black and white plates, numerous figures (1985)

£ 4.45

Members price £ 3.35

Butterflies of Cyprus 1998 (Records of a years sightings) by Eddie John

Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000)

£ 4.30

Members price £ 3.25

Members price £ 3.25

Collecting Het.Bugs (Hemiptera: Heteroptera)

12 pages (including 2 plates). (1946)

£ 1.20

Members price £ 1.00

Collecting Clearwings

12 pages (including 2 plates), 4 figures. (1946)

£ 1.10

Members price £ 1.00

Collecting Lacewings

9 pages, 8 figures, 5 plates. (2nd edition 1976)

£ 2.25

Members price £ 1.75

An Amateur's Guide to the Study of the Genitalia of Lepidoptera

16 pages, 15 figures. (1973)

£ 3.10 Members price £ 2.35

£ 2.55

Members price £ 2.00

Rearing the Hymenoptera Parasitica

16 pages, 1 plate, 10 figures. (1974)

£ 4.20

Members price £ 3.35

Rearing Crickets in the Classroom

12 pages, 2 plates. (1986) (Reprinted 1993)

£ 2.10

Members price £ 1.65

Guidelines for Entomological Site Surveys

Published on behalf of the JCCBI. 7 pages (2000) (Reprinted 2003) Members price £ 2.35

£ 3.10

Members price £ 2.35

The Journal of the Entomological Exchange and Correspondence Club 1935-1936

An AES Jubilee Publication. Fascinating reprint of the very first volume of the AES journal. 100 pages.

£ 4.20

Members price £ 3.35



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Coleophora galbulipennella (Zeller) (Lep.: Coleophoridae) in East Suffolk (VC25) in 2008

The night of the 31 July 2008 produced a good catch of moths at my usual trapping site at Ipswich Golf Club, Suffolk (VC 25; O. S. grid reference TM 208432). Warm, humid and cloudy conditions resulted in a species total of 169 from the two Robinson traps used. Both traps were placed in an area of mixed habitat, with areas of heathland, oak/birch woodland and reed-bed close by. Upon examining and recording the catch, any moths not readily identifiable were retained for later determination. Amongst this batch was an unidentified Coleophorid and as this group are best determined by examination of the genitalia the moth was kept and passed on to Jon Clifton to identify during the winter months. Once dissected, Jon identified the moth as a male specimen of *Coleophora galbulipennella*.

This species is restricted in Britain to the shingle beaches between Dungeness and Hythe in Kent, where it breeds and has been found nowhere else. The food-plant is Nottingham catchfly *Silene nutans*, but on the Continent it can be found on Spanish catchfly *Silene otites*. At the moment, the origins of the Suffolk moth are uncertain. Neither of the known food-plants are known at the site, nor anywhere in the local vicinity. The nearest populations of *Silene otites* are found in the Breck district of Suffolk, some 30 miles away, whilst the nearest *Silene nutans* is found in Kent. The moth is not known to occur on *Silene otites* in the UK at the moment. The only closely related plants present on the Suffolk site are White campion *Silene latifolia* and Red campion *Silene dioica*, but these are not known as food-plants at present.

It is possible that the moth could have wandered from Kent; in recent years a few unusual non-resident moths have occurred at this site. Both Little Thorn *Cephis advenaria* (in 2006 – first Suffolk record) and Dark tussock *Dicallomera fascelina* (in 2005 – first Suffolk record since 1964) have been seen, with the nearest known populations of both species being Kent. Searches will take place in 2009 both at the site and in the Breck area to see if any unknown populations can be found.

My thanks go to Jon Clifton for his determination of the specimen and for the photograph of the genitalia. The slide of the genitalia has been given the number 957 and has been retained in the collection of Jon Clifton.— NEIL SHERMAN, 2 Golf Cottages, Bucklesham Road, Ipswich, Suffolk IP3 8UG (E-mail: neil_sherman@fsmail.net).

***Prochoreutis myllerana* (Fabr.) (Lep.: Choreutidae): New moth species for Shetland**

On the morning of 29 July 2008, Mrs Sylvia Priest was working in the kitchen of her house in Baltasound, Unst, Shetland (VC 112; O. S. grid ref. HP 608086) when she noticed a small moth moving around against the window. She managed to steer it into a suitable receptacle and contacted me to collect it from her later in the day, by which time it had succumbed. Not recognising it as any familiar species, it was subsequently passed to Paul Harvey at the Shetland Biological Records Centre who forwarded it onwards to Jon Clifton, who identified it as *Prochoreutis myllerana*, a new species for Shetland.

The circumstances of its in Shetland remain intriguing. The normal foodplant of this species *Scutellaria*, does not occur in Shetland. The house is situated adjacent to and probably some 25 yards from, a brewery, and it may have travelled to the isle via some supplies for that establishment, although derivatives of *Scutellaria* are not used in making beer.— WENDY DOCKSON, Flat 4, Muckle Flugga Shore Station, Burrafirth, Haroldswick, Shetland ZE2 9EQ.

Toadflax Brocade *Calophasia lunula* (Hufn.) (Lep.:Noctuidae) in Hertfordshire

In discussing the lack of records for this species in Hertfordshire (*antea.* 121:3-4) Colin Plant overlooked my record of an adult to my light in Bengeo, a Hertford suburb, on 6 August 2007. This appears to be only the second record for the county; searches of local patches of *Linaria* species have so far failed to yield any larvae.

This record was part of a run, remarkable for a site recorded pretty well continuously since 1995, of four new noctuids in the space of a month; Striped Lychnis *Shargacucullia lychnitis* (Rambur), (well away from its known nearest sites in Buckinghamshire) on 9 July, Small Ranunculus *Hecatera dysodea* (D.&S.) on 15 July and Tree-lichen Beauty *Cryphia algae* (Fabricius) on 7 August. Of these only Tree-lichen Beauty *Cryphia algae* reappeared in 2008. In an otherwise poor year, this was something of a purple period, especially considering we were away from 18 July to 3 August and so unable to run the trap. I wonder what may have been around then?— ANDREW WOOD, 93 Bengeo Street, Hertford, Hertfordshire SG14 3EL.

Pine-tree Lappet *Dendrolimus pini* (L.) (Lep.: Lasiocampidae) in Scotland: a previously overlooked indigenous species?

Kiddie (*Ent. Rec.* 119: 231-233) recorded the capture in June 2007 of two male Pine-tree Lappets *Dendrolimus pini* in a light trap set in ancient woodland west of Inverness, East Inverness-shire. These followed the first record for Scotland, a male in 2004 at Leachkin, only 14 km away on the outskirts of Inverness (*Ent. Rec.* 119: 155). Targeted fieldwork in 2008 produced another 10 males, six at light and four in pheromone traps, in or around the Kiltarlity area where the 2007 moths were found (Kiddie, R., 2008. Pine-tree Lappet *Dendrolimus pini* confirmed as a British Breeding Species. *Atropos* 35: 64-65). However, subsequent searches for larvae on behalf of the Forestry Commission were unsuccessful.

Because it seemed unlikely that such a large and handsome moth could have been overlooked, recent natural immigration or accidental introduction was assumed to be the source of the population. However, there is a genuine possibility that Pine-tree Lappet is a low-density indigenous species in the Inverness area. Despite the recent growth of interest in moths, large parts of the Scottish Highlands have no resident lepidopterists. Instead, many records come from visiting observers. These tend to select already well-worked areas such as Rannoch, Braemar or Aviemore and to arrive at particular times of the year in the hope of seeing the rare Scottish specialities. Thus early spring (late March into May), is a favourite season, to target species such as Rannoch Sprawler *Brachionycha nubeculosa*, Kentish Glory *Endromis versicolora* and Small Dark Yellow Underwing *Anarta cordigera*. Another popular visiting time is late July

into August, for Cousin German *Protolampra sobrina* and Northern Dart *Xestia alpicola*. Far fewer visit in the second half of June, when Pine-tree Lappet is on the wing.

Then there is the question of habitat. Visiting lepidopterists with limited time at their disposal are unlikely to select commercial pine plantations as trapping sites when faced with such a wealth of natural alternatives: heather moorland, birch woodland, mountain tops and scree, rocky coasts and dunes, all known to hold rare and desirable moths. Before the discovery that Pine-tree Lappet is present, there was little to attract visitors (or locals) to conifer woodland. Even the macro-moth most closely associated with the ancient Caledonian pine forest, Rannoch Looper *Itame brunneata*, is largely diurnal, so light-trapping is not required. Nor are light traps particularly effective around the time of the summer solstice because of the very short nights and lack of proper darkness at these latitudes. And before the availability of modern lightweight generators, running a trap in areas lacking mains electricity was a difficult undertaking.

Next there is the larval stage. Surely the large and hairy caterpillars of Pine-tree Lappet would be very noticeable, like others in the family Lasiocampidae? However, they feed in the crowns of tall pines, only descending to the ground in late autumn to hibernate in moss at the foot of the trees. Despite professional searches in areas where the moth is known to be present, none has yet been found in Scotland.

There are many instances of Lepidoptera species evading detection, most notably the highly distinctive *Ethmia pyrausta*, discovered in Sutherland in 1853, but not found again in Britain for another 143 years (Emmet, A. M. & Langmaid, J. 2002. *The Moths and Butterflies of Great Britain and Ireland* vol. 4 (Part 1). Harley Books, Colchester. Likewise, White Prominent *Leuconycta bicoloria* defied all attempts to refind it in southwest Ireland for 73 years (Allen, D. *et al.*, 2008. The Rediscovery of the White Prominent *Leuconycta bicoloria* in Ireland in 2008. *Atropos* 35: 3-8). So Pine-tree Lappet could conceivably be an overlooked indigenous moth if it were a low-density species occupying an area and habitat not previously of interest to resident or visiting observers. This would only be feasible if the moth were very local. The best and largest remaining areas of the ancient Caledonian pine forest form part of the RSPB's Abernethy Forest reserves. These have been relatively well-worked for moths in recent years, but Pine-tree Lappet has not been recorded and is almost certainly absent. This might be considered evidence against it being indigenous to Scotland. Why would it be confined to the Inverness area unless it was a recent arrival that has not had time to spread?

Climate may provide the answer. In continental Europe, Pine-tree Lappet prefers single-species stands of pine growing in poor dry conditions, where the annual rainfall is less than 60cm or 25 inches (www.forestpests.org/poland/pinemoth). Remarkably, the Inverness area is the only part of Scotland with longstanding suitable habitat where this applies. The inner Moray Firth is a classic example of a rain shadow, protected by high ground on all sides except the

northeast. The driest area exactly matches the present known distribution of the moth. Of course, it might be argued that this is the most likely place where colonisation could take hold. Even so, the coincidence is intriguing.

Support for the theory that Pine-tree Lappet may be a previously overlooked resident comes from the flight time of the adults. The Leachkin moth was trapped on 28 July, but subsequent captures have been from mid to late June. This does not fit the normal flight period in continental Europe, given as "late June through August" (*loc. cit.*). As the Inverness area is so far north, and both 2007 and 2008 were cool poor summers, this discrepancy is surprising. The most likely explanation is that Pine-tree Lappet has adopted a two-year life cycle here, since even in Poland and Germany a few larvae are known to take two years to reach full growth. Analogies would include Northern Eggar *Lasiocampa quercus callunae*, with adults flying from late May to early July after a two-year life cycle, compared with July and August for Oak Eggar *L. q. quercus* with a one-year cycle. Dark Tussock *Dicallomera fascelina* also has a two-year life cycle in the Scottish Highlands (*Ent. Rec.* 105: 219-220). Here, adults fly in the second half of June into July, earlier than the July-August flight period further south. If Pine-tree Lappet has adopted this strategy, it will be obvious from the very different sizes of the two generations of larvae when these are found. Such an adaptation might take time to evolve, suggesting the moth is not a recent arrival.

Normally, questions of a species' exact status would be of academic interest only. For Pine-tree Lappet, this is far from the case. While most lepidopterists were delighted by the announcement that this fine moth had been found in Scotland, the Forestry Commission regarded it as a serious introduced pest and notified Plant Health. This is the organisation charged with preventing the arrival of foreign species that may cause economic damage and eradicating them if they do arrive (www.defra.gov.uk/planth/ph.htm). However, it would be beyond their remit to exterminate a native species, though not to control it.

Unfortunately, these decisions were apparently taken without consulting, or even informing, any of the conservation organisations. Not only is there uncertainty whether Pine-tree Lappet is an introduced adventive, a natural colonist or overlooked indigenous species, there is real doubt whether it would ever become an economic pest in Britain. As far as I can determine, periodic population explosions of this species causing widespread serious damage to forestry plantations have only been reported from Germany and Poland, mainly where pines are growing in poor dry conditions. Even here it is considered far less harmful than Pine Beauty *Panolis flammea*, already native in Scotland (bazy.ibles.waw.pl). There is little evidence that Pine-tree Lappet has caused problems in Scandinavia, especially in more recent years, while it has never caused serious economic damage in Finland (www.eppo.org/QUARANTINE/Pest). Certainly its congener, *Dendrolimus sibiricus*, currently spreading west in Russia, is considered far more of a threat.

If Pine-tree Lappet is indigenous to the Inverness area it has never caused any noticeable damage, nor has it spread beyond the region with the very low annual

rainfall it prefers. Even if it is a recent arrival, it has been here for at least five years without causing problems, and probably for much longer. Only four males were captured using pheromone traps in 2008, which suggests its density is low. Throughout the rest of Scotland the rainfall is very much higher, greatly reducing the risk of problems if the moth does spread.

It is also worth remembering that some moths that are serious pests of conifer plantations in mainland Europe are harmless in Britain. They include Black Arches *Lymantria monacha* (Heath, J. & Emmet, M. A. 1979. *The Moths and Butterflies of Great Britain and Ireland*, vol. 9. Curwen Books, London), and even Pine Hawk-moth *Hyloicus pinastri* (*Ent. Rec.* 114: 235-268). In fact, Pine-tree Lappet could be considered an asset, a welcome addition to the relatively impoverished fauna of our coniferous woodland, the moth equivalent of the Capercaillie. Already English observers are making plans to visit the Inverness area in the hope of seeing it. Scotland benefits from such wildlife tourism.

Finally, if Pine-tree Lappet is indeed native or already well-established, exterminating it will be a difficult and expensive operation, with success far from guaranteed. Recent concerted attempts to eradicate Oak Processionary Moth *Thaumetopoea processionea* and Gypsy Moth *Lymantria dispar* from a very limited area of London seem to have failed. How much harder might it be to eradicate Pine-tree Lappet from an indefinite area of the Scottish Highlands? The use of pesticides or biological agents such as *Bacillus thuringiensis israelensis* (*Bti*), which are not species-specific, could even do more harm than good by disrupting the ecology of the Caledonian pine forest. In continental Europe, measures taken to reduce population build-ups of Pine-tree Lappet include encouraging birds and protecting ants' nests. Far preferable would be a programme of monitoring by means of pheromone traps for adults and glue bands on tree trunks to intercept larvae when they ascend in spring after hibernating in the moss, as employed elsewhere in Europe. It is to be hoped that interested wildlife organisations such as Scottish Natural Heritage and Butterfly Conservation will at least be involved in the discussion before any drastic action is taken.— ROY LEVERTON, Whitewells, Ordiuhill, Cornhill, Banffshire AB45 2HS.

MIKE MAJERUS

We are saddened to report that Professor Mike Majerus died quietly, in his sleep, in the early hours of 27 January 2009. He had recently been diagnosed with mesothelioma. We hope that a full obituary might be ready for the next issue of this journal.

RECORDS OF PLATYGASTRIDAE (HYM.: PLATYGASTROIDEA) FROM THE ISLE OF MAN, WITH DESCRIPTIONS OF THREE NEW SPECIES

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Abstract

Records of Platygastridae (Hymenoptera) from the Isle of Man are listed, with notes on biology, when known, and geographic ranges. Fifty-seven species are recorded, all for the first time from the Isle of Man; *Platygaster manensis* sp. nov. *Synopeas aceris* sp. nov. and *Synopeas manense* sp. nov. are described as new to science; *Platygaster subapicalis* Buhl is new to the British Isles, reared from *Contarinia* sp. on *Prunus laurocerasus*. The hitherto unknown male of *Synopeas romsoeense* Buhl, 1999 is described.

Key words: Isle of Man, Hymenoptera, Platygastridae, *Platygaster*, *Synopeas*, new species.

Isle of Man Platygastridae

The forthcoming checklist of the Platygastridae of the British Isles (Buhl and Nottion, in prep.) lists about 250 species. Despite this, the family has been little studied in the British Isles. Hitherto no records from the Isle of Man have been published.

One of us (FDB) has collected platygastroids in the Isle of Man and has sent specimens (about 1.400, the majority from yellow pan traps at Crofton, Baldhoon Road, Laxey) to the other (PNB) for identification. A further ca. 700 specimens were collected by Steve M. Crellin at The Curraghs in 1995 (mostly by Malaise trap) and sorted out and sent to PNB by FDB in connection with this study. Of the nearly 70 species present in the material, 57 could be identified to species, 53 of them already known from the British Isles, while one was hitherto only known from continental Europe, and three are described as new to science. All identifiable species are included in the annotated checklist below, but for reasons of time and space, only a few specimens of many of the species are mentioned: for example *Amblyaspis prorsa*, *A. roboris* and *Leptacis tipulae* were present in huge numbers. The list could be substantially extended by further studies. Voucher specimens (card mounted) for our records will be deposited in the Manx Museum. The holotypes of the new species are deposited in the Zoological Museum, University of Copenhagen, Denmark, and paratypes, when available, in the Manx Museum and the Natural History Museum, London.

The family Platygastridae is divided into the species rich subfamily Platygastrinae which are egg-larval parasitoids of Cecidomyiidae, and the relatively species poor subfamily Sceliotrachelinae with more diverse bionomics, here only represented by one species of *Allotropa*. The principal work used for determination of the present material is Vlug (1985).

Unless otherwise mentioned, the specimens have been collected in yellow pan traps.

Grid references for the locations cited are: Laxey, Baldhoon Road and Glen Gardens, SC 42 84; Laxey, Glen Mooar, SC 42 85; Port Mooar, SC 48 90; Douglas, Bucks. Road, Lord Street and James Street, SC 37 75; Douglas, Harris Terrace, SC 37 76; Douglas, Villa Marina and Manx Museum, SC 3876; The Curraghs, Goshen, SC 358931, 359950 and 361949; Ballaterson Manor, SC 3549489; Ballaterson Lane, SC 358949.

Acerotella boter (Walker). Laxey, Baldhoon Rd., 30.06.-01.07.1999, 1 female; 22-23.05.2001, 1 female. Europe from Ireland to Russia.

Allotropa mecrida (Walker). Douglas, Harris Terrace, 08.04.1999, 1 male, emerged 10.04.1999 from *Phenacoccus aceris* on *Tilia*; 17.05.1999, 1 male; 13.09.2000, 2 females, emerged 17.07. and 18-30.07.2001, collected as small nymphs of *Phenacoccus aceris* on *Tilia*-leaf, mummified by 13.10.2000. Douglas, Bucks. Road, 17.06.1998, 2 males, emerged same day; 31.03.1999, 1 male, emerged 04.1999, these 3 males collected as mummified nymphs of *Phenacoccus aceris* on *Malus*. Douglas, Lord Street, 17.05.2000, 1 male from collection of *Phenacoccus aceris* on ?hornbeam. Douglas, James Street, 17.05.2000, 1 female, 3 males from collection of *Phenacoccus aceris* and aphid mummies on rowan (*Sorbus*). Known from a number of pseudococcid hosts (Vlug, 1995). From Ireland to Korea, south to Spain and Iran.

Amblyaspis crates (Walker). Laxey, Baldhoon Rd., 05-06.07.1997, 1 female, 1 male; 24.08.1998, 1 female; 16-17.05.1999, 1 male; 30.06.-01.07.1999, 2 females, 1 male; 28-29.08.1999, 1 female; 26.09.1999, 1 male; 24-26.08.2007, 1 male; 28-29.09.2007, 1 male. From NW-Europe to Spain.

Amblyaspis otreus (Walker). Laxey, Baldhoon Rd., 30.06.-01.07.1999, 1 female. Known from the London area.

Amblyaspis prorsa (Walker). Laxey, Baldhoon Rd., 04.10.1997, 1 female, 3 males; 19-20.06.1998, 1 female; 24.08.1998, 1 female, 3 males; 22-23.09.1998, 2 males; 21-22.10.2000, 1 female; 21-23.05.2007, 1 female, 4 males; 29-31.07.2007, 5 males; 24-26.08.2007, 3 males; 28-29.09.2007, 3 females. West Europe, from the British Isles, Scandinavia to Spain, a doubtful specimen from Mongolia.

Amblyaspis roboris (Haliday). Laxey, Baldhoon Rd., 18.10.2001, 1 female; 16-17.05.2002, 1 female; 12-13.09.2002, 1 male; 07-08.09.2004, 1 male; 16-18.04.2007, 1 female; 21-23.05.2007, 3 females; 24-26.08.2007, 1 male. The Curraghs, Goshen, 19-25.06.1995, 1 female; 25.06.-02.07.1995, 1 female. West Europe, from the British Isles and Scandinavia to Spain, East to Korea.

Amblyaspis scelionoides (Haliday). Laxey, Baldhoon Rd., 31.05. and 04.10.1997, 3 males; 02.06.1997 and 23.07.1998, 2 males from raspberry plant sprayed with malathion; 19-20.06.1998, 1 male; 24-25.07.1998, 2 males; 12-13.07.1999, 1 male; 21-23.05.2007, 1 female; 24-26.08.2007, 1 female; 29-31.05.2008, 1 female. The Curraghs, Goshen, 02-09.07.1995, 1 female; 23-30.07.1995, 1 female. From Ireland to Korea.

Anopediast lacustris Kieffer. The Curraghs, Goshen, 25.06.-02.07.1995, 1 female. Europe.

Euxestonotus error (Fitch). Laxey, Baldhoon Rd., 30.06.-01.07.1999, 1 female; 29-31.07.2007, 1 female; 28-29.06.2008, 1 female; 23-24.07.2008, 1 female. The Curraghs, Ballaterson Manor, 06-18.08.1995, 1 female. Holarctic.

Euxestonotus hasselbalchi Buhl. Laxey, Baldhoon Rd.; 13-14.05.1998, 1 female; 21-23.05.2007, 2 females; 29-30.05.2008, 1 female. NW-Europe.

Inostemma boscii (Jurine). Laxey, Baldhoon Rd., 19-20.06.2002, 1 female; 28-29.06.2008, 1 female. The Curraghs, Goshen, 02-09.07.1995, 1 female. Europe; doubtful specimens from Mongolia.

Inostemma sp. near *contariniae* Szelényi. The Curraghs, Goshen, 19-25.06.1995, 1 female.

Iphitracelus lar Haliday. Laxey, Baldhoon Rd., 05-06.08.2001, 1 male; 12-13.09.2002, 1 female; 07-08.09.2004, 1 female. Palaearctic, Nearctic, Oriental and Neotropical regions.

Leptacis laodice (Walker). Laxey, Baldhoon Rd., 29-31.07.2007, 1 female. From W-Europe to Korea.

Leptacis orchymonti (Debauche). Laxey, Baldhoon Rd., 09-10.09.1997, 1 female; 05-06.08.2001, 1 female; 16-18.05.2004, 1 male. From W. Europe to Korea.

Leptacis ozines (Walker). Laxey, Baldhoon Rd., 29.05.1997, 1 female; 13-15.05.1998, 1 female; 05-06.08.2001, 3 males; 16-17.05.2002, 1 female; 04-05.08.2003, 1 male; 21-23.05.2007, 1 female; 29-31.07.2007, 1 female, 1 male; 24-26.08.2007, 1 female; 21-23.10.2007, 1 female; 28-29.06.2008, 1 female. The Curraghs, Ballaterson Lane, 06-18.08.1995, 1 male. From W. Europe to Korea.

Leptacis tipulae (Kirby). Laxey, Baldhoon Rd., 05-06.07.1997, 2 females; 24-25.07.1998, 2 females. An important parasitoid of *Sitodiplosis mosellana* (Géhin) and *Contarinia tritici* Kirby (Vlug, 1995). W-Europe to Russia.

Leptacis vlugi Buhl. Laxey, Baldhoon Rd., 05.07.1997, 1 female; 24-25.07.1998, 1 female; 28-29.08.1999, 1 female; 28-29.06.2008, 1 female. Port Mooar, 21.01.2007, 2 females swept from grass near shore. The Curraghs, Goshen, 10-17.09.1995, 1 female. W-Europe from Scandinavia to Spain.

Platygaster aebeloeensis Buhl. Laxey, Baldhoon Rd., 21-23.05.2007, 1 male. NW-Europe.

Platygaster aegeus Walker. Laxey, Baldhoon Rd., 28-29.08.1999, 3 females; 29-31.07.2007, 2 females. The Curraghs, Goshen, 23-30.07.1995, 1 female. NW-Europe.

Platygaster cebes Walker. Laxey, Baldhoon Rd., 22.09.1998, 1 female; 18.02.2001, 1 female; 24-26.08.2007, 1 male; 28-29.09.2007, 1 male; 27.04.2008, 1 male. NW-Europe to Spain.

Platygaster chloropus Thomson. Laxey, Baldhoon Rd., 29-31.07.2007, 1 female; 28-29.06.2008, 1 female. NW-Europe, doubtful specimens from Mongolia.

Platygaster cochleata Walker. Laxey, Baldhoon Rd., 28-29.08.1999, 1 female; 04-05.08.2003, 1 female; 28-29.06.2008, 1 female. W-Europe from Scandinavia to Spain.

Platygaster demades Walker. Laxey, Baldhoon Rd., 28-29.08.1999, 1 female. The Curraghs, Goshen, 21.08.-03.09.1995, 1 female. A common species on various gallmidge hosts. An important parasitoid of *Dasineura mali* Kieffer on apple (Vlug, 1985). Holarctic.

Platygaster dryope Walker. Laxey, Baldhoon Rd., 05.07.1997, 1 female. NW-Europe.

Platygaster euhemerus Walker. Laxey, Baldhoon Rd., 02.06.1997, 1 female from raspberry plant sprayed with malathion. W-Europe to Korea.

Platygaster filicornis Walker. Laxey, Baldhoon Rd., 05.07.1997, 1 male; 12-13.09.2002, 1 male; 21-23.05.2007, 2 males; 09-10.09.1997, 1 male; 29-31.05.2008, 1 male. The Curraghs, Goshen, 19-25.06.1995, 1 male. W-Europe to Korea.

Platygaster gracilipes Huggert. Laxey, Baldhoon Rd., 28-29.08.1999, 1 female; 05-06.08.2001, 1 female; 16-18.05.2004, 1 female; 29.06.2007, 1 female. The Curraghs, Goshen, 25.06.-02.07.1995, 2 females. Holarctic.

Platygaster henkvlugi Buhl. The Curraghs, Goshen, 19-25.06.1995, 1 female; 25.06.-02.07.1995, 1 female. W-Europe.

Platygaster leptines Walker. Laxey, Baldhoon Rd., 28-29.06.2008, 1 male. Europe and Mongolia.

Platygaster longestriolata Thomson. Laxey, Baldhoon Rd., 29-31.07.2007, 1 female. NW-Europe, doubtful specimens from Mongolia.

Platygaster lysicles Walker. Laxey, Baldhoon Rd., 28-29.08.1999, 1 female; 04-05.08.2003, 1 female. NW-Europe to Russia.

***Platygaster manensis* sp. n.**

Diagnosis. Occiput reticulate and with a few short transverse carinae; female A9 slightly transverse; area between propodeal carinae smooth and shiny; female metasoma 1.2 times as long as rest of body, with T2 weakly striated and apical tergites pointed, combined nearly as long as T2.

Description. Female. Body length 1.5-1.9 mm. Body black; antennae, mandibles, tegulae and legs dark brown; A1 slightly darker than A2-A10; base and apex of all tibiae, and all tarsi entirely, slightly lighter than rest of legs.

Head from above (Fig. 1) 1.8 times as wide as long, very slightly wider than mesosoma; occiput distinctly and slightly transversely reticulate-coriaceous, with a few short transverse carinae medially; vertex and upper half of frons reticulate-coriaceous without transverse elements, in lower half of frons with such elements, just above antennae with transverse wrinkles. OOL:OL = 3:4. Head in frontal view about 1.15 times as wide as high. Antenna (Fig. 2) with A1 0.85 times as long as height of head, 1.1 times as long as distance between inner orbits; A9 1.25 times as wide as long.

Mesosoma 1.4 times as long as wide, nearly 1.1 times as high as wide. Sides of pronotum reticulate-coriaceous (not longitudinally so) in about upper half, smooth along hind margin and below, here with seven punctures with setae. Mesoscutum strongly and uniformly reticulate-coriaceous, with very few setae, all of them along notauli or margins; mid lobe in anterior third with two weak admedian lines; notauli strong and complete; mid lobe posteriorly narrow and very slightly prolonged, not touching base of scutellum; scuto-scutellar grooves wide and deep, with very few, inconspicuous setae. Mesopleuron smooth. Scutellum (Fig. 3) slightly and evenly convex, just above level of mesoscutum, distinctly reticulate-coriaceous, with sparse setae. Metapleuron with pilosity all over. Propodeal carinae parallel, area between them about as long as wide, smooth and shiny.

Forewing clear, 2.6 times as long as wide, overreaching tip of metasoma by a length equal to the combined length of T5-T6, with fine and dense microtrichia; marginal cilia 1/15 the width of wing. Hindwing 6.2 times as long as wide, with two hamuli; marginal cilia at most 0.25 times the width of wing.

Metasoma (Fig. 4) about 1.2 times as long as head and mesosoma combined, as wide as mesosoma. T1 with two weak longitudinal carinae rather close together, smooth and bare between them, laterally with numerous long setae. T2 weakly striated in basal foveae to one-third of its length, medially smooth, rest of tergite as well as T3-T6 smooth; T3 with about 4 setae, T4 with 4-5 setae, and T5 with 6-8 setae on each side, arranged in one transverse row on T3, in two irregular transverse rows on each of T4-T5; T6 with about 12 scattered setae; all setae inserted in very inconspicuous punctures. T3-T6 combined 0.7-1.0 times as long as T2. Sternite 2 not convex anteriorly.

Male. Body length 1.6 mm. Antenna (Fig. 5) with A9 1.2 times as long as wide; flagellar pubescence one-third the width of segments. Metasoma as long as head and mesosoma combined.

Material examined: Holotype female: Great Britain, Isle of Man, Laxey, Baldhoon Road, Crofton, 24-26.04. 2004, yellow pan trap, F. D. Bennett. Deposited in the Zoological Museum, University of Copenhagen, Denmark. Paratypes: 3 females, 1 male same data.

Affinities. *P. manensis* differs from *P. sterope* Walker, 1835, *P. pleuron* Walker, 1835, *P. sonchis* Walker, 1835, and *P. eriphyle* Walker, 1835 in shape or sculpture of head and in having less striated T2 and more pointed female metasoma; it differs from *P. cebes* Walker, 1835 in having more transverse head and no cross carinae between propodeal carinae; it differs from *P. sagana* Walker, 1835 in having shorter preapical antennal segments of female, in being larger in body size and in having female metasoma less pointed at apex; it differs from *P. alpina* Buhl, 2009 in having shorter preapical antennal segments of female and less striated T2; and it differs from *P. schwarzi* Buhl, 2009 in having shorter female antennae and longer female metasoma. Cf. Vlug (1985) and Buhl (2009). *P. manensis* runs to *P. inconspicua* Buhl, 1999 in Buhl's (2006) key to Danish *Platygaster*, but *P. inconspicua* has female A9 1.3 times as long as wide, frons smooth medially, T1 crenulated, and it is smaller than *P. manensis*.

Etymology. Named after the island with the type locality.

Platygaster manto Walker. Laxey, Baldhoon Rd., 28-29.06.2008, 1 female. W-Europe.

Platygaster nisus Walker. Laxey, Baldhoon Rd., 02.06.1997, 1 female from raspberry plant sprayed with malathion; 28-29.08.1999, 1 male; 19-20.06.2002, 1 female, 1 male; 04-05.08.2003, 1 male; 29.06.2007, 3 females; 29-31.07.2007, 5 females; 24-26.08.2007, 1 female, 2 males; 28-29.06.2008, 1 female, 1 male; 23-24.07.2008, 1 female. The Curraghs, Goshen, 23-30.07.1995, 1 female. From W. Europe to Korea.

Platygaster oebalus Walker. Laxey, Baldhoon Rd., 30.06.-01.07.1999, 1 female. Known as a parasitoid of *Dasineura brassicae* (Winnertz) (Vlug, 1995), and of *D. spadicea* (Rübsaamen) (Buhl, 2006). NW-Europe to Mongolia.

Platygaster oscus Walker. Laxey, Baldhoon Rd., 28-29.08.1999, 1 female; 07-08.09.2004, 1 female. NW-Europe and Russia, doubtful specimens from Mongolia.

Platygaster otanes Walker. Laxey, Baldhoon Rd., 29-30.04.1999, 1 male; 10-12.05.2000, 1 female under red currant bush. From Scandinavia and Spain to Mongolia.

Platygaster pelias Walker. Laxey, Baldhoon Rd., 16-17.05.2002, 1 female. Douglas, Manx Museum, 1 female 08.09.1999, emerged 06.06.2000; 2 females 13.10.1999, emerged 05.2000 and 20-31.06.2000; all these 3 females from *Dasineura fraxini* (Bremi) on ash (*Fraxinus*). Reared from *Lasioptera rubi* Heeg. on *Rubus* by Vlug (1985). From Scandinavia to Spain.

Platygaster sagana Walker. Laxey, Baldhoon Rd., 16-17.05.2002, 1 female. The Curraghs, Goshen, 19-25.06.1995, 5 females; 25.06.-02.07.1995, 1 female. From W. Europe to Korea.

Platygaster splendidula Ruthe. Laxey, Baldhoon Rd., 22-23.05.2001, 1 female; 24-26.08.2007, 1 female. Iceland, Scandinavia, Mongolia, doubtful specimens from Spain and Korea.

Platygaster sterope Walker. Laxey, Baldhoon Rd., 24.08.1998, 1 female; 29-30.04.1999, 3 females; 16-17.05.1999, 1 female; 21-23.05.2007, 1 female. England.

Platygaster subapicalis Buhl. Laxey Glen Gardens, 23.05.2004, 6 females, 10 males, emerged 20-24.04.2006 from *Contarinia* larvae in flower buds of *Prunus laurocerasus*. Denmark and Estonia (Buhl, 2006).

Platygaster tisias Walker. The Curraghs, Goshen, 19-25.06.1995, 1 female; 02-09.07.1995, 1 female. Europe and Mongolia.

Synopeas aceris sp. n.

Diagnosis. Hyperoccipital carina distinct; scutellum rounded, only with a small lamella posteriorly; female metasoma as long as rest of body, 1.3 times as wide as high.

Description. Female. Body length 1.3-1.5 mm. Body black; most of A1 and legs very dark brown; base of A1, entire A2-A10, trochanters, base of tibiae, most of fore tibiae, and all tarsi medium to light brown.

Head from above (Fig. 6) 2.0 times as wide as long, slightly wider than mesosoma (22:21), distinctly and slightly transversely reticulate-coriaceous, with a distinct hyperoccipital carina. OOL slightly shorter than diameter of lateral ocellus; OOL = 0.3 LOL. Eye in lateral view 3.1-3.2 times as high as distance between upper margin of eye and top of head. Head in frontal view slightly more than 1.2 times as wide as high. Antenna (Fig. 7) with A1 0.9 times as long as height of head, slightly more than 1.2 times as long as distance between inner orbits; A8 as long as wide, A9 nearly 1.1 times as wide as long.

Mesosoma 1.5 times as long as wide, almost 1.1 times as high as wide. Sides of pronotum distinctly reticulate-coriaceous (not longitudinally so) in slightly more than upper half, lower part smooth except for about four setae. Mesoscutum finely reticulate-coriaceous with some smoother spots, evenly covered by rather sparse setae, with no trace of notauli; hind margin medially with a short, unmodified smooth prolongation which hardly reaches base of scutellum; scuto-scutellar grooves wide, covered by dense setae. Mesopleuron smooth except for faint longitudinal wrinkles below tegula and 9-10 short longitudinal grooves along upper part of hind margin. Scutellum (Fig. 8) rounded, not keeled, rather densely setose all over, posteriorly with a small brownish lamella. Metapleuron

with sparse pilosity all over, denser only along hind margin. Propodeal carinae very slightly semitransparent, fused.

Forewing 0.9 times as long as entire body, 2.4 times as long as wide, almost clear, with fine and dense microtrichia; marginal cilia absent. Hindwing 4.3 times as long as wide, with two hamuli; marginal cilia 0.2 times the width of wing.

Metasoma (Figs 9-10) as long as head and mesosoma combined, 0.95 times as wide as mesosoma, 1.3 times as wide as high. T2-T5 smooth, narrowly reticulate-rugose along hind margin, T6 with such sculpture nearly all over, smooth only at extreme base; apical tergites with a few setae (eight on T5).

Male. Length 1.05-1.5 mm. Antenna (Fig. 11) with A4 slightly swollen, fully twice as long as wide, A8-A9 each about 1.1 times as long as wide; flagellar pubescence inconspicuous and short. Metasoma about 0.9 times as long as head and mesosoma combined.

Material examined. Holotype female: Great Britain, Isle of Man, Laxey, Baldhoon Road, Crofton, 16-17.05. 2002, yellow pan trap, F. D. Bennett. Deposited in the Zoological Museum, University of Copenhagen, Denmark. Paratypes: Same data as holotype, 1 male; same locality, 02-03.05. 2001, 2 males, yellow pan trap; same locality, 27-28.04. 2008, 292 males in yellow pan trap under Sycamore (*Acer pseudoplatanus* L.); Laxey Glen Gardens, 28.05.2001, 1 male, emerged 26.04. 2002 from *Dasineura* larva from flowers of Sycamore; 22.05.2002, 1 female, 1 male as adults in flowers of Sycamore; 14-17.05. 2004, 11 females, 13 males, emerged 15.03.-03.04.2005, from *Dasineura* larvae in flowers of Sycamore, larvae put in sand 29.05. 2004. All F.D. Bennett.

Affinities. *S. aceris* differs from the Irish species *S. hibernicum* Buhl & O'Connor, 2009 e.g. in having more transverse head, hyperoccipital carina, more rounded scutellum with lower lamella, and female metasoma more convex with apex not downcurved. Cf. also Buhl & O'Connor (2009). *S. aceris* differs from *S. inermis* Thomson, 1859 and *S. lugubris* Thomson, 1859 in having longer and more convex female metasoma, from *S. inermis* also in having more transverse head with stronger hyperoccipital carina, from *S. lugubris* also in shape of scutellar lamella. Cf. Buhl (1998). *S. aceris* differs from *S. euryale* (Walker, 1835) in having stronger hyperoccipital carina, more convex scutellum, and longer female metasoma. Cf. Vlug (1985).

Etymology. The name is derived from *Acer pseudoplatanus*, the host plant of the cecidomyiid host *Dasineura* sp.

Synopeas ciliatus Thomson. Laxey, Baldhoon Rd., 24.08.1998, 1 female; 24-26.08.2007, 1 female; 21-23.10.2007, 1 female; 28-29.06.2008, 1 male; 23-24.07.2008, 1 female. From the British Isles to Spain and Russia.

Synopeas curvicauda (Förster). Laxey, Baldhoon Rd., 09-10.09.1997, 1 female; 28-29.08.1999, 1 female; 26.09.1999, 1 female. A parasitoid of *Asphondylia conglomerata* Stefani on *Atriplex halimus* L. (Vlug, 1995). NW- and Central Europe.

Synopeas latvianum Buhl. The Curraghs, Goshen, 02-09.07.1995, 1 female. Latvia.

***Synopeas manense* sp. n.**

Diagnosis. Hyperoccipital carina rather strong; female A9 1.25 times as wide as long; scutellar spine conspicuous; marginal cilia of forewings 0.1 the width of wing; female metasoma as long as rest of body.

Description. Female. Body length 1.05 mm. Head from above (Fig. 12) 1.7 times as wide as long, wider than mesosoma (16:15), distinctly reticulate-coriaceous (not transversely so), with a distinct and complete hyperoccipital carina. OOL equal to shorter diameter of lateral ocellus, about one-third of LOL. Head in frontal view 1.1 times as wide as high. Antenna (Fig. 13) with A1 0.9 times as long as height of head, 1.25 times as long as distance between inner orbits; A9 about 1.25 times as wide as long; antennal clava with numerous conspicuous setae.

Mesosoma 1.6 times as long as wide, almost 1.2 times as high as wide. Sides of pronotum reticulate-coriaceous (not longitudinally so) in upper half, smooth in lower half and along narrow hind margin. Mesoscutum finely and uniformly reticulate-coriaceous, evenly and rather densely, finely setose, with no trace of notauli; hind margin medially slightly and bluntly prolonged over base of scutellum, otherwise unmodified; scuto-scutellar grooves inconspicuous, each with about seven long setae. Mesopleuron smooth. Scutellum (Fig. 14) almost smooth, towards sides densely setose, posteriorly with a distinct spine and a vertical lamella below. Metapleuron smooth and bare in about anterior half, rest with long pilosity. Propodeal carinae high, semitransparent, fused.

Wings somewhat damaged in unique specimen. Forewing clear, with fine and dense microtrichia, about 2.4 times as long as wide; marginal cilia 0.1 the width of wing. Hindwing 6.4 times as long as wide, with two hamuli; marginal cilia slightly more than 0.4 the width of wing.

Metasoma (Fig. 15) as long as head and mesosoma combined, narrower than mesosoma (14:15), 1.25 times as wide as high. T2 smooth except for a narrow stripe of weak rugosity along hind margin, T3-T5 each with a transverse stripe of rugosity; T6 reticulate-rugose all over. Apical tergites with a few fine setae (6-8 on each of T4-T5).

Material examined. Holotype female. Great Britain, Isle of Man, Laxey, Baldhoon Road, Crofton, 4-5.10.1997, yellow pan trap, F. D. Bennett. Deposited in the Zoological Museum, University of Copenhagen, Denmark.

Comments. The specimen is discoloured by years in alcohol, but it seems to have been blackish with at least A1-A6, entire fore legs, trochanters and basal half of mid and hind tibiae yellowish. However, the colour is of minor importance for the recognition of the species. A few specimens from Sweden and Latvia seen by PNB may belong to this species, but they are larger with relatively slightly longer metasoma than in the type.

Affinities. *S. manense* runs to *S. trebius* (Walker, 1835) and *S. velutinus* (Walker, 1835) in Vlug's (1985) key, but it has less transverse head and longer female

metasoma than these species. Furthermore, *S. trebius* has three carinae on T1-T2, and *S. velutinus* has notauli indicated. *S. manense* has also longer female metasoma than *S. carpentieri* Kieffer, 1916, and *S. gallicola* Kieffer, 1916 has more transverse head and smaller scutellar spine than *S. manense*, and forewings without marginal cilia. Cf. Kieffer (1926).

Etymology. Named after the island with the type locality.

Synopeas muticus (Nees). Laxey, Baldhoon Rd., 16-17.05.2002, 1 female; 19-20.06.2002, 1 female. Douglas, Villa Marina, 31.05.2000, 5 females collected as adults in foliage infested with *Contarinia quercina* (Rübsaamen), det. K.M. Harris. The Curraghs, Goshen, 19-25.06.1995, 2 females. The concept of this *Synopeas*-species here follows Kieffer (1926). NW- and Central Europe.

Synopeas myles (Walker). Laxey, Baldhoon Rd., 16-17.05.2002, 2 females; 21-23.05.2007, 1 female. A parasitoid of *Dasineura marginemtorquens* (Bremi) on *Salix* sp. (Vlug, 1995). NW-Europe, doubtful specimens from Mongolia.

Synopeas rhanis (Walker). Laxey, Baldhoon Rd., 04.10.2001, 1 female, 4 males from *Dasineura urticae* (Perris) on nettle; 29-31.07.2007, 1 male; 24-26.08.2007, 1 female; 28-29.06.2008, 1 female, 1 male. The Curraghs, Goshen, 09-16.07.1995, 1 female. The Curraghs, Ballaterson Lane, 06-18.08.1995, 1 male. A common parasitoid with well-known bionomics, cf. Vlug (1985). From NW-Europe to Spain and Mongolia, doubtful specimens from Korea.

Synopeas romsoeense Buhl. Laxey, Baldhoon Rd., 24-26.08.2007, 1 male. Hitherto only known from 2 females, the Danish holotype (Buhl, 1999) and a British specimen from England (Surrey). The male is 0.75 mm long. Antennal segment 4 is distinctly widened, with a basal emargination, preapical antennal segments are each twice as long as wide, with rather dense flagellar pubescence which is two-thirds as long as width of segments. Marginal cilia of fore wings are about 0.25 times as long as width of a wing.

Synopeas sosis Walker. Laxey, Baldhoon Rd., 27-28.04.2008, 2 males under Sycamore. W-Europe.

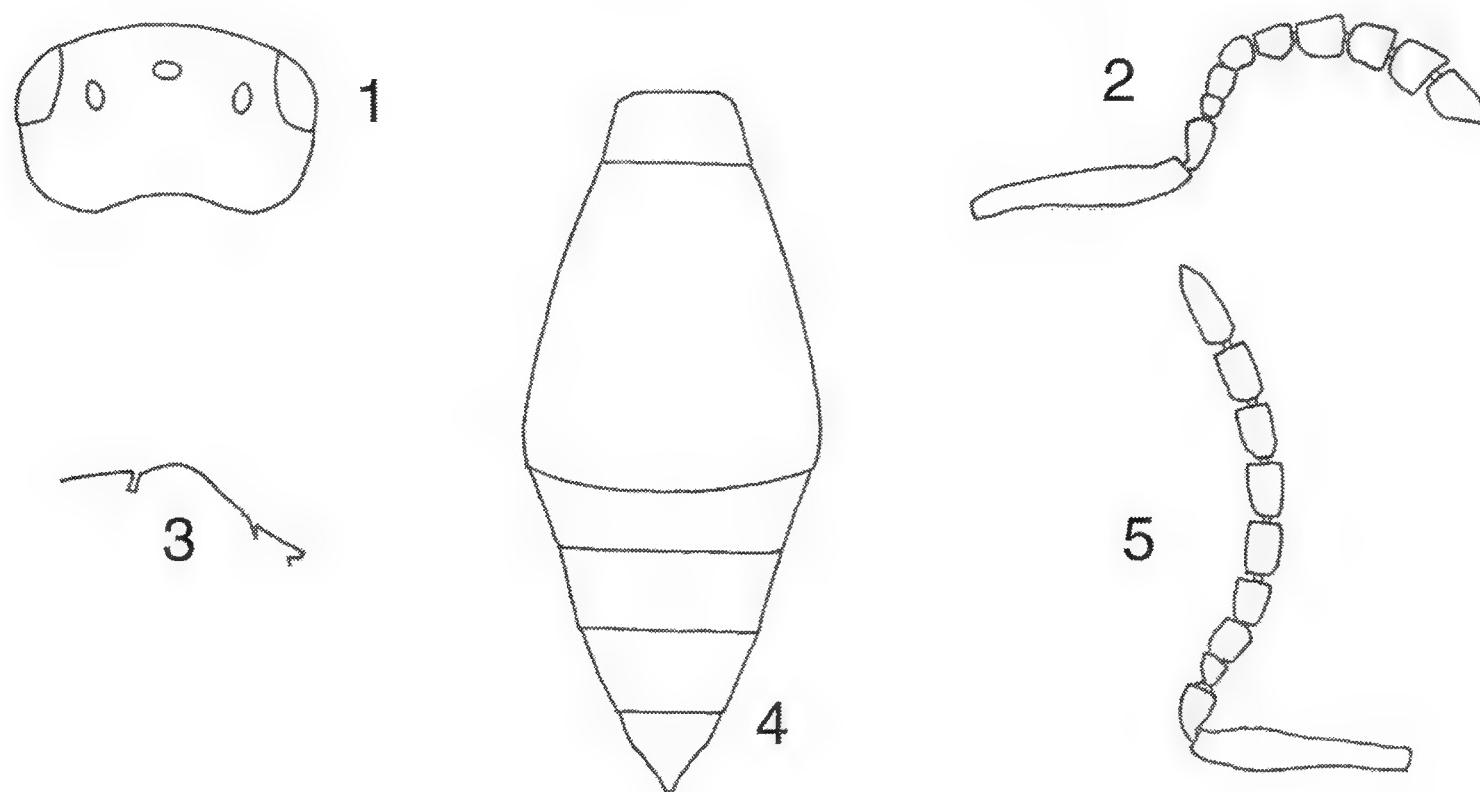
Synopeas trebius (Walker). Laxey, Baldhoon Rd., 06.07.1997, 1 male; 26.09.1999, 1 male; 29-31.07.2007, 1 male. NW-Europe to Spain and Mongolia, doubtful specimens from Korea.

Trichacis didas (Walker). Laxey, Baldhoon Rd., 16-18.04.2007, 1 female. A parasitoid of *Mayetiola destructor* Say on *Triticum* (Vlug, 1995). England.

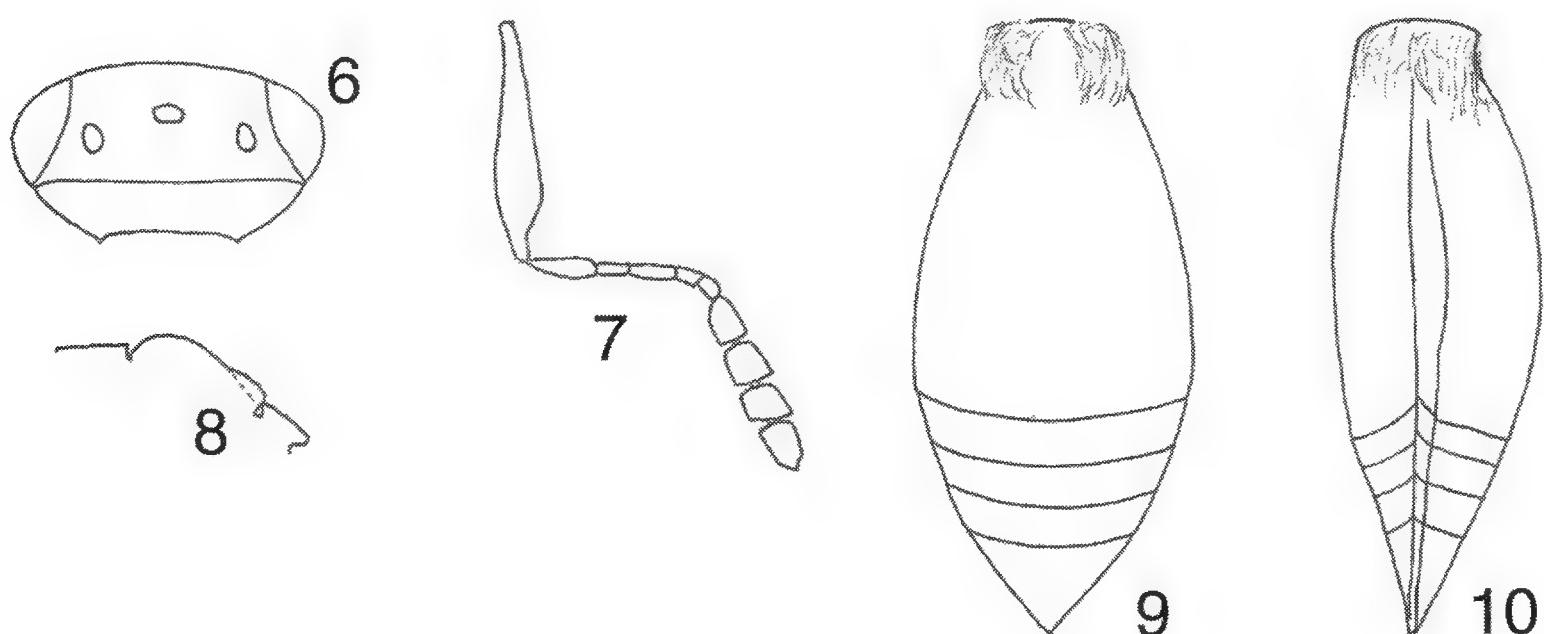
Trichacis pisis (Walker). Laxey, Baldhoon Rd., 24-26.04.2004, 1 female. NW-Europe to Spain.

Acknowledgements

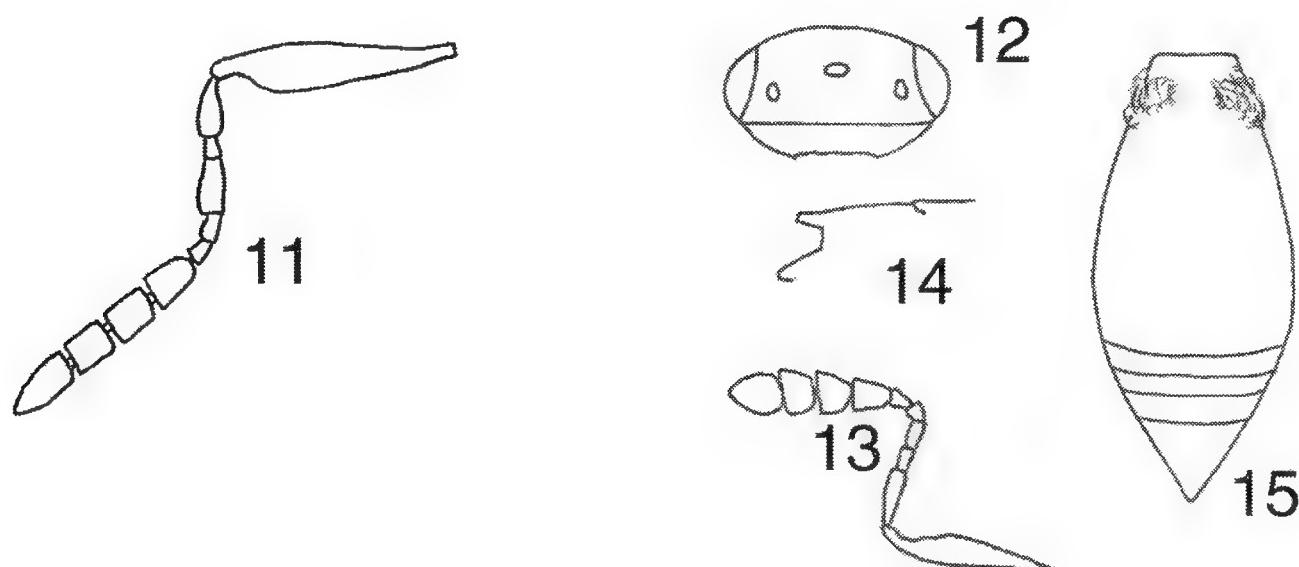
We thank Steve M. Crellin and the Wild Life Trust for the material from the Curraghs and Keith M. Harris for identifying the host Cecidomyiidae. We are also grateful to David G. Notton for putting the authors in contact.



Figs 1-5 *Platygaster manensis* sp. n. 1, head from above; 2, female antenna; 3, scutellum and propodeum in lateral view; 4, female metasoma from above; 5, male antenna.



Figs 6-11 *Synopeas aceris* sp. n. 6, head from above; 7, female antenna; 8, scutellum and propodeum in lateral view; 9, female metasoma from above; 10, female metasoma in lateral view; 11, male antenna.



Figs 12-15. *Synopeas manense* sp. n. female. 12, head from above; 13, antenna; 14, scutellum and propodeum in lateral view; 15, metasoma from above.

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Tree-lichen Beauty *Cryphia algae* (Fabr.) (Lep.: Noctuidae) in north-west Kent during 2008

I have been recording this now naturalised migrant in my suburban garden since 2002, when five were noted. None were seen during 2003 then 47 were recorded during 2004, nine in 2005, 17 in 2006 and 25 in 2007. The earliest date for these years was 14 July (2005) with the latest being 6 September (2007). My first record for 2008 was a singleton on 8 July, a rather early date. A family holiday then intervened and I did not trap again until 25 July. Three Tree-lichen Beauties were found resting on the outside of the 125W Robinson trap during the night; these were duly potted and placed within a fridge. Trapping the following night, another 21 were noted and these were also taken out of circulation and kept cool. On the third night a further five were recorded, making a total of 29 over the three nights. All were subsequently released.

After waiting three nights for them to disperse, I next trapped on 30 July, when 11 individuals were noted. These were also potted. Over the next two nights, 31 July and 1 August, another 30 were noted, thus making a total of 41, with a mean

total so far for 2008 of seventy. On 5 August another 19 were recorded with lower numbers on the following dates of 8 Aug (4), 11 Aug (6), 16 Aug (2), 20 Aug (1), 23 Aug (2) and, finally, 29 August (1). Thus, for the year 2008 the total number of Tree-lichen Beauty caught was 106 – the most that I have ever recorded for my garden. I also recorded it at two other localities, Blackheath in south east London, where 11 were noted on 30 July and a singleton at Mereworth near Maidstone on 6 August.

When I first began recording this species in my garden I noted that they did not arrive at the trap until approximately 02.00 hours, but this year has been different. First individuals were noted about an hour after dusk, with the last arriving just before dawn. As in past years, most were found settled on and around the trap, with only a few actually inside. I have endeavoured to obtain pairings, without success, even with adding various lichens into the small cage.— TONY STEELE, 57 Westfield Road, Barnehurst, Kent DA7 6LR.

***Anthophila fabriciana* (L.) (Lep.: Choreutidae) in Scotland in November 2008**

A record of the moth *Anthophila fabriciana* (Choreutidae) on 3 November 2007 in Middlesex (Kallmer, D., 2008. *Ent. Rec.* **120**: 192) was noted in an Editorial Comment as being ‘quite exceptional’. In autumn 2008 there were unusually large numbers of this species at my regular stomping ground of Blackdog, on the coast north of Aberdeen. Many were seen nectaring on Common Ragwort *Senecio jacobaea* and on 8 October I counted 70 on a single plant. The moth continued to be easily found for most of the month. I thought that snow and frosts around 28 and 29 October would have seen an end to the records. However on 1 November a singleton was found after a short search of the few remaining Common Ragwort flowers and the following day there was one on flowers of Tansy *Chrysanthemum vulgare* at Peterculter, west of Aberdeen.

Of the 75 records held by the North East Scotland Biological Records Centre (NESBReC) there are just two previously in October, both in 2005, on 16.x at Blackdog (my record) and 23.x at Gight Woods (Mark Young). A request on the Scottish Moths Yahoo email group yielded further October records just from Ayrshire; ‘mid October’ 2006 (Neil Gregory) and on 14 October 2008 (Marco McGinty). Tremewan (1981, *Ent. Gaz.* **32**: 2-3) suggested that the species may overwinter as an adult after observing moths flying around the shaded side of Lawson Cypress *Chamaecyparis lawsoniana* on 7 September. However there is nothing to suggest that late records in 2008 were anything other than an especially large, presumably third, generation.

Thanks to NESBReC, Mark Young and the above named observers for assistance with gathering information.— NICK A. LITTLEWOOD, Macaulay Institute, Craigiebuckler, Aberdeen, AB15 8QH (Email: n.littlewood@macaulay.ac.uk).

Marbled Brown *Drymonia dodonaea* ([D.& S.]) (Lep.: Notodontidae) in September

During September 2008, Barry Madden, who lives in Sprowston, Norwich sent me a photograph of a moth purporting to be an 'early December moth'. On viewing the photo (Plate 10) it was clearly not an early December Moth *Poecilocampa populi* L., but the melanic form *nigrescens* Lempke of the Marbled Brown *Drymonia dodonaea*. Barry informs me it was taken at 125 watt MV light in his garden on 16 September 2008.



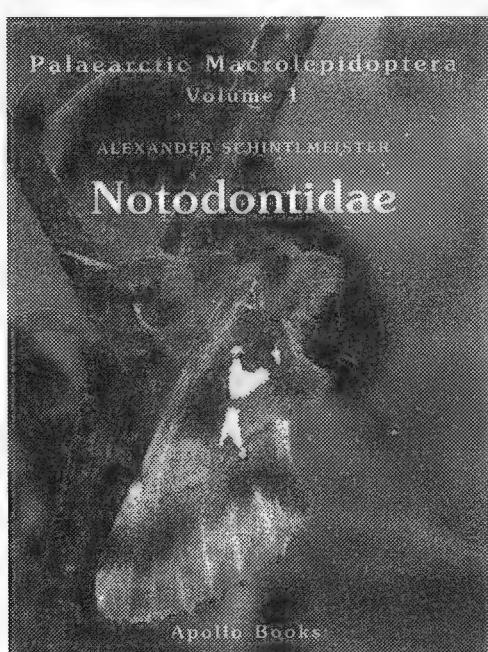
Plate 10. Marbled Brown *Drymonia dodonaea* ([D.& S.]) f. *nigrescens* Lempke, Sprowston, Norfolk, 16 September 2008, leg. B. Madden.

This is an exceptional date. Skinner (1998. *The colour identification guide to Moths of the British Isles*. second edition. Viking) gives the adult flight period as late May and June; deWorms (1979. in Heath & Emmet, Eds. *The Moths and Butterflies of Great Britain and Ireland*, volume 9. Harley Books), gives late May to early July. For the whole of Europe, deFreina & Witt (1987. *Die Bombyces und Sphinges der Westpalaearktis*. Forschung & Wissenschaft), cite April to July. All works agree that there is only one generation of adults per year; this record appears to upset that view.

Certainly in Norfolk *dodonaea* had a very good year during 2008, with its flight period extending from 10 May until at least 4 July (personal records); these peaked with several recording forays to woodland where more than ten moths were recorded on one night alone. I personally have not heard of more than this number being recorded from a single night in Norfolk for many years. — JON CLIFTON, Kestrel Cottage, Station Road, Hindolveston, Norfolk, NR20 5DE (E-mail: jon.clifton@btinternet.com).

BOOK REVIEW

Palaearctic Macrolepidoptera, volume 1: Notodontidae by Alexander Schintlmeister. 482pp., including 40 pages of colour plates. 2200 text illustrations, including distribution maps and monochrome photographs of the genitalia of males and some females. 305 x 229 mm, hardbound. ISBN: 978-87-88757-77-4. Apollo Books, 2008. €140 Order direct from Apollo Books, Kirkeby Sand 19, DK-5771 Stenstrup, Denmark. Apollo can accept payment in GB pounds.



For most amateur moth enthusiasts, macros divide conveniently into noctuids, geometers and the rest; this volume provides the definitive work of reference and identification of a sizeable chunk of 'the rest'. For the professional, on the other hand, the appeal of this critical contribution to the literature will be somewhat more scientific since it provides a long overdue review of this large and familiar family of moths.

Notodontids are widespread, being absent only from the Polar Regions and New Zealand with over 3000 described species. The number of Palaearctic species recognised has risen steadily in parallel with interest in the group. Staudinger & Rebel (1901) is perhaps the earliest list with a mere 96 species, but the present work list 716 specific taxa in the Region. This considerable increase owes itself in great part to a better understanding of the family level classification of the Lepidoptera and, in particular, to the use of genital structure in defining relationships. Notodontidae are part of the superfamily Noctuoidea, which includes species with both trifid and quadrifid wing venation. In the present arrangement, Notodontidae all possess trifid venation except that the subfamily Platychasmatinae, a quadrifid group, is also incorporated (other authors have treated this as belonging to the Noctuidae). The trifid family Thaumetopoeidae, sometimes treated as a subfamily of the Notodontidae, is afforded full family status and regarded as having affinities with the Lymantriidae. The position of our British *Diloba caeruleocephala* (L.), placed in the Notodontidae by Bradley (2000) and others is not specifically mentioned, but by exclusion from the present work we must assume that the Dilobinae remains a subfamily of Noctuidae – where I personally feel it should stay! It is interesting to note that whilst the graph of new species encountered suggests that on the basis of current knowledge we are unlikely to add more than very few extra species to the list of Palaearctic Notodontidae, the author seems sure that '... the introduction of new methods such as DNA barcoding will dramatically increase the number of known species'.

In the meantime, we now have a superb work of reference for the 716 currently accepted species. To Alexander Schintlmeister who, we are informed in the biographical section of the work, has amassed a private collection of over 300,000 notodontid specimens, over 8,800 genitalia slides and over 20,000 photographic images, we should express our gratitude by purchasing his excellent book.

Colin W. Plant

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ANTHROPOPHILOUS LACHRYPHAGY IN A MALAGASY BUTTERFLY, *SALAMIS ANTEVA* (WARD, 1870) (LEP.: NYMPHALIDAE)

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Abstract

A case of the Madagascan butterfly *Salamis anteva* (Ward, 1870) drinking at a human eye is documented. Lepidopteran lachryphagy usually involves moths and has only rarely been previously recorded in Madagascar, and humans are only rather rarely visited. This may have been a chance association by the specific individual, as the species is common yet there are no other records of it visiting eyes.

Keywords: butterfly, eye-sucking, Madagascar, Marojejy, human, lachryphagy, Lepidoptera, *Salamis anteva*

Introduction

Lepidopteran lachryphagy (the ingestion of vertebrate eye-secretions by butterflies or moths) has been documented in South America, Africa, tropical Asia, and, as of 2004, Madagascar, often at ungulates and elephants, but also at other mammals, reptiles, and, rarely, birds (e.g. Büttiker & Nicolet, 1975, Lamas, 1986, Bänziger, 1988a, 1992, Büttiker, 1997, Hilgartner, *et al.* 2007). Most known lachryphagous lepidopterans are nocturnal moths (Bänziger, 1992, Hilgartner *et al.*, 2007). Such behaviour in butterflies has apparently been documented only in South America, where it seems to be regularly undertaken by various genera at the eyes of turtles *Podocnemis* and caimans *Caiman* (Turner *et al.*, 1986, Lamas, 1986); and D. C. Lees (*in litt.*, 2008) photographed *Philaethria* sp. (perhaps *P. dido* (Linnaeus, 1763)) feeding on chelonian eyes in Tampopata, south-east Peru, in October 1986. Humans are not regularly or frequently visited by lachryphagous lepidopterans (Bänziger, 1992, 1995). Here we document a case of lepidopteran lachryphagy remarkable in three features: a butterfly visiting a person in Madagascar.

Observation

During a conservation survey of the Marojejy Strict Nature Reserve (14°18'39"S, 49°33'52"E) focussed on the birds and mammals, we photographed an individual, probably male (based on body shape as visible in the photograph; D. C. Lees *in litt.*, 2008), of the nymphaline butterfly *Salamis anteva* (Ward, 1870) sucking at a human eye in the heat of the day on 8 September 1988 near the village of Ambodimanga (14°22'S, 49°38'E). The proboscis was inserted onto the eye between the middle of the near-closed eyelids (Plate 11). The strange sensation of the proboscis on the conjunctiva and/or inner eyelid was chiefly uncomfortable not physically but through concern that perhaps just



Plate 11. *Salamis anteva* at a human eye, 8 September 1988, Ambodimanga, Marojejy Strict Nature Reserve, Madagascar.
Photo: A. F. A. Hawkins

previously the butterfly had been at faeces. The butterfly fed from a settled position, as do most lachryphagous moths, although a few species partly hover by not clinging with all six legs to the host while at the same time beating with the wings; and one species, the hawkmoth *Rhagastis olivacea* Moore, 1872 actually hovers a few centimeters in front of the eye (Bänziger, 1988a, 1988b, 1992). Once settled, it imbibed for many minutes, and became relatively oblivious to nearby, moving, people looking at and photographing its antics: even when accidentally flushed, it soon returned.

At the time we were not aware that this behaviour was noteworthy; we took no field-notes, and the photograph was to serve only as an amusing vignette (for most of the foreigners in the survey team, it was the 1st–3rd visit to tropical forest). Documenting the record at this late remove, we cannot determine whether we experienced eye-sucking by butterflies only on this one day or also at other times. During the survey of Marojejy, which lies in the humid rainforest of Madagascar's north-east, *S. anteva* was common in primary lowland forest and moist montane forest, being recorded from 8 September to 20 October 1988 over an altitude range of 300–1300 m; it was also noted 'hill-topping' at 2133 m, the highest local summit, that of Marojejy-Est (Evans, 1990; where apparently '18 September' was a typographic error for 8 September).

Discussion

Because the survey lasted only a few, consecutive, months, it is not possible to determine whether *S. anteva* regularly visits people's eyes in this region, or whether this was a chance behaviour shown by perhaps only one individual. A subsequent wildlife survey of Marojejy (Goodman, 2000) did not visit this sector of the reserve and it is unclear whether such behaviour was experienced: there is

no obvious place in their report where it should have been documented, had it occurred. D. C. Lees (*in litt.* 2008) surveyed the butterflies of Marojejy from c.125 m to the summit for ten days in mid November 2006 but did not record *S. anteva*. A P. Soga apparently collected butterflies in Marojejy in the 1950s–1970s (Guillaumet *et al.*, 1975), but Evans (1990) traced no written account of his records or experiences.

Lachryphagy seems to be unusual in the Lepidoptera of Madagascar. AFAH has spent many months living in similar habitats across Madagascar (1987–2007) without even so much as a speculative visit to his eyes by a butterfly. Hilgartner *et al.* (2007) even proposed that there would be no lepidopterans sucking mammalian eyes there, reflecting the absence of native ungulates. However, endemic hippopotamuses *Hippopotamus* spp. apparently persisted until the arrival of humans (Stuenes, 1989, Tyson, 2000) and the genus is a known host to tear-drinking moths elsewhere (Bänziger, 1995). At the extinction of hippopotamuses, any lachryphagous lepidopterans could have moved to the domestic ungulates brought to Madagascar by people and which serve as common hosts in the continental tropics (e.g. Bänziger, 1992). There is no reason to suspect lachryphagy would be more likely in Marojejy than elsewhere in the island. *Salamis anteva* is common and widespread in Madagascar's eastern forest, being recorded from sea level to 1475 m by Turlin (1983) and Lees *et al.* (2003). The species is endemic to Madagascar, but the genus occurs elsewhere in the Afrotropics (Lees *et al.*, 2003). It may be that this behaviour was shown by an individual that had previously come to human sweat (as many species of tropical butterflies do) and by chance discovered the eye and subsequently, by the time it met us, it came straight to the eye. Were the behaviour habitual not accidental, there should surely be other records, as underscored by Lamas's (1986) remark that “That a number of butterflies feed on lacrymal secretions of reptiles is well known by lepidopterists who have done a certain amount of field work in the lowland forests of tropical South America. It is *common*, in less disturbed areas, to observe butterflies sitting on the heads of caymans and turtles” (emphasis ours).

Many dozens of species of lachryphagous lepidopterans are now known (Bänziger, 1995, 2007). Lachryphagy at humans is taxonomically widespread among the Lepidoptera, with Bänziger (1992) knowing of the behaviour in 23 species (about a quarter of the then known lachryphagous lepidopteran species) in six families (all those known to him to hold lachryphagous species). Some species attack people in the local absence of other plausible animal hosts, showing that the moths did not accidentally feed from an unintended host (Bänziger, 1992). Bänziger (1988a) considered humans to be a true but infrequent host. The instance described here appears to be the first record of a butterfly, rather than a moth, drinking at human eyes anywhere in the world. It is clear why anthropophilous lachryphagy is rare in butterflies: the very obvious presence would result in all but a sleeper or a fascinated naturalist shooing the insect away or killing it.

Acknowledgements

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Oak Bush-cricket *Meconema thalassinum* (Degeer) (Orth.: Tettigoniidae) at Killarney, Co. Kerry, Ireland

The authors worked the Killarney district quite exhaustively from 1985 to 1995, primarily accumulating records of the Purple Hairstreak butterfly *Quercusia quercus* (L.). Subsequent recording has been undertaken on a less extensive basis. It was in the course of one of these forays, during 1989, that JWL first encountered the Oak Bush-cricket *Meconema thalassinum* in the vicinity of Ross Island, virtually on the outskirts of Killarney town. Specimens were dislocated from vegetation on a recurrent basis in this locality during that year. Under the impression that the species is vegetarian, he took one or two to observe but these did not, unfortunately, survive very long in captivity. It was only during the winter of 2007 that we unearthed some facts about the species while studying David R. Ragge's 1965 work, *Grasshoppers Crickets and Cockroaches of the British Isles* (Warne, Wayside & Woodlands Series). His statement that 'the insects do not seem to flourish without animal food' explains the demise of the previously mentioned ill-fated captives. This fact was borne out unequivocally due to our lack of knowledge or first hand experience of the Order.

During that same year, we also noted it in the environs of Derrycunihy Wood, from which all our ensuing records originate in May of 1991, 1994, 2001 and 2007. It is purely coincidental that we encountered the species in the first place, but it appeared in the beating tray during that time of the year as we beat the oaks for Lepidoptera larvae and Coleoptera. Even though we usually tend to cover a large area of woodland during these forays, it has been our experience that we generally only find the nymphs in one specific area of Derrycunihy. Being nocturnal, and spending its day virtually motionless on leaves of various trees, we would imagine that it is probably quite widely distributed throughout this particular district.

What struck us most from studying Ragge's distribution maps is that the Oak Bush-cricket *Meconema thalassinum* Degeer was only shown as recorded in Ireland from Co. Limerick. The more recent distribution maps provided by

Marshall & Haes (1988. *Grasshoppers and allied insects of Great Britain and Ireland*. Harley Books), scarcely alter that situation, with additional records in single ten-kilometre squares in each of counties Wicklow, South-east Galway, Clare, Waterford and South Kerry. It is clear that there is probably not a great deal of recording undertaken in respect of the Orthoptera in this country. Consequently, we deemed it necessary that our discoveries be duly recorded.

The first record of *Meconema thalassinum* in Ireland results from a specimen collected from Cratloe Wood, Co. Clare in July 1897. This specimen was located in the National Museum of Ireland by Martin Speight, together with a 1904 specimen from Portlaw, Co. Waterford. According to Cotton (1982. A Synopsis of the Irish Orthoptera, *Entomologists Gazette*. 33: 243-254, the former was incorrectly attributed to Co. Limerick by a succession of authors including Lucas (1914), Kevan (1952; 1961) and Ragge (1965).

Further records are provided by Cotton (1980. Distribution records of Orthoptera (Insecta) from Ireland. *Bulletin Irish biogeographical Society*. 4: 13-22). They are somewhat sporadic and cover a period of forty-six years, from 1920 to 1976: '1st September 1920, E. F. Bullock collection in the National Museum of Ireland; Kenmare Demesne, Killarney, July 27, E. F. Bullock collection in the National Museum of Ireland; Ross Wood, Killarney, 19 September '31. E. F. Bullock collection in the National Museum of Ireland; on oak, edge of oak woods, Tomies Wood, Lough Leane, V 9088, 26th June 1976. Martin C. D. Speight.'

The distribution of *Meconema thalassinum* (DeGeer) in Ireland is restricted to the southern part of the country, virtually a mirror of its occurrence in Britain. The Maps in Marshall & Haes (1988. *Grasshoppers and allied insects of Great Britain and Ireland*, Harley Books) are probably the most up-to-date available and include more recent records from Cos. Wicklow and Galway. The latter refers, presumably, to a specimen beaten from oak at Garryland Wood, 7 July 1978. It also quotes the antiquarian records from Cos. Clare and Waterford.

It would be interesting to encounter the species during the autumn when, according to Ragge 'females may quite commonly be seen at dusk probing the trunks of oak-trees for suitable egg-laying sites'. Some areas of Derrycunihy are a challenge to navigate on a fine summer evening, albeit pursued by clouds of midges, so the prospect of a nocturnal visit is pretty much daunting; needless to say, the best areas are easily the most inaccessible. However, the Oak-Bush Cricket is a most attractive insect and the possibility of obtaining some specimens for macro-photography may prove difficult to resist.

Special thanks are due to John Walsh for valuable assistance in providing source material in relation to the production of these Notes.— MICHAEL O'SULLIVAN, 20 St. James Gardens, Killorglin, Co. Kerry, Ireland and JOHN W. LAVERY, Holly Cottage, Ballahadigue, Listowel, Co. Kerry, Ireland.

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THE EFFECTS OF CLIMATIC WARMING ON FLIGHT TIME OF MOTHS IN YORKSHIRE

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Abstract

Flight times of moths have changed appreciably in the last 30 years. Climatic change is the main driving factor. Yorkshire weather data shows a rapid rise in mean daytime and night-time temperature since the mid 1980s. This has not been even throughout each month of the year and is largely confined to the first half of the year, being most marked in February. It is this rise in spring temperature which is responsible for the earlier flight times of moths until the beginning of July. Moths flying in the second half of the year appear to have been unaffected.

Keywords: Lepidoptera, Yorkshire, Phenology, Climate Change.

Introduction

A Pine Beauty moth *Panolis flammea* appeared in my garden moth trap on 21 February 2009. This is the earliest date ever recorded in Yorkshire. In recent years a similar scenario has taken place many times with other species. Spring moths such as Pale Brindled Beauty *Phigalia pilosaria* and Common Quaker *Orthosia cerasi* appear in some years before the year end. Unexpected species are having second broods. Climatic change is upon us and moths, like the miner's canary, are quick to respond. This response takes many forms. Regional distributions change as new species move northwards into the county. Voltinism changes with more species becoming double-brooded due to a longer season (Fletcher, 2006) and migration patterns alter. It is the alteration in flight time of many species however which is the most obvious and sensitive change, and as moth recorders we are in a unique position to monitor and comment upon the changing trends.

Studies tell us that the UK climate changed in the last century with temperatures in central England rising by almost 1°C; most of the rise occurring since 1980 (Hulme et al 2002. Climate Change Scenarios for the United Kingdom, The UKCIP02 Briefing Report. <http://www.ukcip.org.uk>). It is expected that by 2080, annual temperature across the UK may rise between 2°C and 3.5 °C, with the greatest warming in the south and east in summer and autumn. Winters are expected to become wetter and summers drier. Data for Yorkshire forecasts average temperatures in the region to rise 1.0 – 2.3°C by 2050 and 1.6 – 3.9°C by 2080, again with wetter winters and drier summers (Government Office for Yorkshire and the Humber 2005, Your Climate – Yorkshire and Humber's Climate Change Action Plan <http://www.yourclimate.org>).

We cannot assume that climatic change is following the same course all across the country, and variations even within Yorkshire may be significant. A search for local weather statistics shows that specific data for Yorkshire can be readily

accessed on-line from the Bradford Met Office (<http://www.metoffice.gov.uk/climate/uk/stationdata/bradforddata.txt>). This tabulates monthly figures as far back as 1908 with average maximum and minimum temperatures, rainfall, sunshine and days of frost for each month. In the absence of other data, I will assume that these figures are representative of what is happening across the whole county. The Yorkshire Moth Group has now compiled a large computerised database of well over one million moth records from Watsonian Yorkshire (VC61 to 65), the vast majority of the records from the last 30 years. Using these two resources I would like to explore how changing weather patterns have affected the flight times of our commoner moths throughout the year over the last 30 years.

I started this study with preconceived ideas. I expected that data would show temperatures to have risen a degree or so over the last 30 years, and that moths were flying a few days earlier. As usual however, the situation turns out to be a lot more complex than I had imagined and as so often happens, has posed more questions than it has answered.

Results

A brief look at the Bradford figures immediately shows that average daytime and night-time temperatures have risen over the last thirty years by more than we would expect from the national data; days by a little more than 2°C and nights by a little less than 2°C (Figs 1 & 2). The trends show no sign of slackening off and the warmest three years have all come since 2002. Looking at rainfall patterns it is difficult to discern an overall trend, as rainfall fluctuates widely in the county (Figs 3 & 4). If we ignore the wet summers of 2007 and 8, the trend line for summer is flat. Graphs for winter and summer are illustrated, and similar graphs can be shown for other times of the year. There are as yet no signs of the wetter winters and drier summers that we have been promised in national and local forecasts.

The surprises start when we begin to look at the overall 2°C temperature rise in more detail. The rise is not of an even nature throughout the year. In fact the change between the seasons is quite dramatic. February daytime temperatures have rocketed by a surprising 4°C whilst December temperatures have climbed by a far more modest 1°C (Fig. 5). In fact the six months showing the largest rise in daytime temperature are the first six months of the year. The last six months of the year by contrast show much more modest temperature rises of between 1 and 1.75°C. Looking in more detail at February temperatures back to the 1940s (Fig. 6), temperatures remained quite stable until the cold winter of 1986. In the years following this however there has been a sudden and sustained rise in temperature. What we can see here can of course be expressed in two words – early spring. Or an early end to winter if you prefer. All other climatic effects in recent years have been minor compared to this one effect, and it is this which we will see is having a major effect on changing flight times of our moths.

I would now like to examine the effect that this early start to the season is having on flight times of common moths. In order to do this, we will look at four groups of moths.

1. Spring moths, on the wing from March to May.
2. Late spring/early summer moths flying from late May until early July.
3. Mid to late summer moths appearing from July to early September.
4. Late season moths flying from September to the year end.

For each group of moths I would like to look at:

1. How much earlier or later they are flying on average by comparing the average flight times of all records of a species in the 15 years from 1979 to 1993 with the 15 years from 1994 to 2008.
2. How we can make a 'best fit' correlation of the average flight time for each year against the daytime or night-time temperature at any particular time of the year.

In order to do this with any accuracy, we must choose moths which are common in the county, where the populations and distributions are stable, and where voltinism is stable. It is much easier to choose examples from univoltine moths as at times it can be very difficult to calculate average flight times due to overlapping broods. I have tried to choose moths with a 'bell-shaped' curve of flight times rather than the type of irregular and extended emergence shown in some species such as Poplar Hawk-moth.

1. Spring moths

In Yorkshire, the commonest moths in the moth trap in spring are the *Orthosia* sp. – Hebrew Character, Common Quaker etc, along with other species such as Early Grey and Shoulder Stripe. These moths over-winter as pupae and it is no great surprise that flight times have become earlier when we compare the two 15 year periods. Actual figures are as follows:

Clouded Drab	<i>Orthosia incerta</i>	12 days earlier
Hebrew Character	<i>Orthosia gothica</i>	11 days earlier
Common Quaker	<i>Orthosia cerasi</i>	10 days earlier
Shoulder Stripe	<i>Anticlea badiata</i>	8 days earlier
March Moth	<i>Alsophila aescularia</i>	7 days earlier
Small Quaker	<i>Orthosia cruda</i>	6 days earlier
Early Grey	<i>Xylocampa areola</i>	5 days earlier

Hebrew Character has the largest number of records and so might be expected to show the most robust correlation with temperature if indeed such a correlation can be found. The "best fit" for this species is with March daytime temperatures (Fig. 7). March night-time temperatures show a slightly less impressive

correlation. The fit is in fact quite dramatic. It can be seen quite clearly that a cold March leads to Hebrew Characters flying late whilst a warm March leads to a much earlier flight time. Similar results can be seen for the other common spring species. This of course is what we would expect. It is no surprise that when the weather warms up, pupae are going to hatch and more moths are on the wing.

2. Late spring/early summer moths

As the spring moths start to disappear, in most years in Yorkshire there is a quiet period in early May – the ‘May Gap’. From mid-May and well into June many new species appear on the wing. This group contains species which have over-wintered both as pupae and as larvae. How have flight times altered in this group of moths? In fact the vast majority of the common species are flying considerably earlier, and figures show earlier flight times which are only marginally less impressive than the early spring brigade. Typical examples of common moths are as follows:

Rustic Shoulder-knot	<i>Apamea sordens</i>	9 days earlier
Silver-ground Carpet	<i>Xanthorhoe montanata</i>	8 days earlier
White Ermine	<i>Spilosoma lubricipeda</i>	8 days earlier
Buff Ermine	<i>Spilosoma luteum</i>	7 days earlier
Middle-barred Minor	<i>Oligia fasciuncula</i>	5 days earlier
Common Swift	<i>Hepialus lupulinus</i>	5 days earlier
Ingrailed Clay	<i>Diarsia mendica</i>	5 days earlier
Beautiful Golden Y	<i>Autographa pulchrina</i>	3 days earlier

The next task is to correlate the emergence of this group of moths with temperature in the early part of the flight period which we have seen worked so well with Hebrew Character. Choosing White Ermine as a first example I was quite unable to find a fit with any part of its flight time. My preconceived idea that May temperatures would be the driving factor was immediately found to be incorrect. To my great surprise the ‘best fit’ by far was with the average February night-time temperature (Fig. 8). Apart from 2003, which correlated much better with May temperatures, the graph was quite dramatic.

White Ermine of course over-winters as a pupa, so perhaps pupal development depends upon early spring temperature. Perhaps if I chose a species over-wintering as a larva this would show my correlation with May temperature. I therefore tried to do the same with two more species in the group, both common in the county with a good spread of records on the database, Rustic Shoulder-knot and Silver-ground Carpet. Again, correlation against late spring/early summer temperatures was unsuccessful. The ‘best fit’ for Rustic Shoulder-knot was again the February night-time temperature (Fig. 9) with an almost exact fit apart from the occasional year – 1999 and 2003 were more aligned to May temperatures. Silver-ground Carpet flight times did not match any month at all until I averaged

out February and March daytime temperatures which produced another quite dramatic fit (Fig. 10). Again 1999 did not follow the trend exactly, but the other years matched so well that it was quite obvious that the early spring effect stretched way beyond the early spring moths and was having an effect much later in the season on moths whose flight times extended to early July.

3. Mid to late summer moths

By the height of summer, a whole new group of species has emerged, often in large numbers. These moths usually over-winter as small larvae or sometimes as eggs. How has climatic change affected this group of moths? In fact the answer is 'not very much'. Despite summers being 1° to 1.5°C warmer, flight times have altered very little. Although some species are flying a little earlier, others are actually flying later than they did fifteen years previously. Again choosing common univoltine species as examples, the results are as follows:

Mouse Moth	<i>Amphipyra tragopoginis</i>	4 days earlier
Common Rustic agg	<i>Mesapamea secalis</i> agg.	2 days earlier
Lesser BBY Underwing	<i>Noctua janthe</i>	1 day earlier
Large Yellow Underwing	<i>Noctua pronuba</i>	1 day earlier
Flounced Rustic	<i>Luperina testacea</i>	1 day later
Square-spot Rustic	<i>Xestia xanthographa</i>	1 day later
Lesser Yellow Underwing	<i>Noctua comes</i>	2 days later

Again we can try to correlate flight times with monthly temperatures. For this group of moths, the 'early spring' effect seems to have worn off. In a manner reminiscent of the early spring moths, temperatures in the early part of their flight times are the driving force. In the example below, average flight times for Flounced Rustic show an almost exact correlation with average July/August daytime temperatures (Fig. 11). Hardly a single year is out of line. Night-time temperature shows a reasonable correlation but not as dramatic as daytime. Attempts to match flight time with any other month shows very poor correlation. Normality has been restored and this is very much the sort of effect that we might expect.

4. Late season moths

Moths emerging late in the season tend to over-winter in the egg stage. A whole new range of species are attracted to the light trap from September until well into November and often beyond. The end of the year as we have seen has warmed up comparatively little, so it is no surprise that average flight times have altered little, with only Feathered Thorn showing a significant move.

Brick	<i>Agrochola circellaris</i>	2 days earlier
Sprawler	<i>Astroskopus sphinx</i>	2 days earlier
Figure of Eight	<i>Diloba caeruleocephala</i>	2 days earlier

December Moth	<i>Poecilocampa populi</i>	0 days
Red-line Quaker	<i>Agrochola lota</i>	0 days
Yellow-line Quaker	<i>Agrochola macilenta</i>	0 days
Green-brindled Crescent	<i>Allophyes oxyacanthae</i>	2 days later
Feathered Thorn	<i>Colotois pennaria</i>	5 days later

Again I struggled to match data with my preconceived ideas. I had always assumed that emergence of this group of moths might be triggered by reduced temperatures in the autumn rather than a temperature increase. For example December Moths have all finished by mid-December in Yorkshire. There is not a single January record on the county database. In contrast, in the south of England this moth flies later with some records extending into January. Attempts to correlate the first six moths in the list with temperatures in any month of the year drew a complete blank. The only rough correlation was with the last moth, Feathered Thorn. This is not typical of the group as it is now flying five days later, and over the last ten years, flight time surprisingly correlates with an increase in temperature rather than a decrease (Fig. 12). The graph however is far from impressive and we are left with little idea of what factors govern the flight times of these late season moths.

Discussion

Studies on flight times of butterflies have shown that all species are flying earlier (Burton and Sparks, 2002); in some cases considerably earlier. The changes are more pronounced in those passing the winter in the pupal stage, and slightly less in those over-wintering as larvae and eggs. The most dramatic effects are seen in those over-wintering as adults as warmer weather tempts them out of hibernation. Earlier emergence seems to be more pronounced in those butterflies flying early in the year but no explanation is offered for this. Little research has been done on moths although Burton and Sparks (*op. cit.*) refer to a German study which seemed to show that moths flying early in the year were flying proportionally earlier than later-flying moths. Most of the species studied were however migrants. All of these studies used dates of first appearance rather than mean flight time. This data is easily gathered and effective in other phenological research such as studying leaf burst in plants, but it can be a problem with lepidoptera as first appearance can at times be idiosyncratic. Certain individuals of some species of moth such as Early Grey *Xylocampa areola* can fly much earlier in the year than the main brood and skew figures. For this reason, some researchers use the date of the third moth to give a more accurate picture. With a good series of records however, better results should be obtained by averaging total flight times. This means that rogue individuals flying much earlier or later become less significant.

Most species of moth survive the winter by entering a state of diapause in which metabolism is switched to a minimum and food reserves are conserved (Young, 1997, Majerus, 2002). This is particularly seen in species which over-winter as larvae but can occur whichever over-wintering strategy is used.

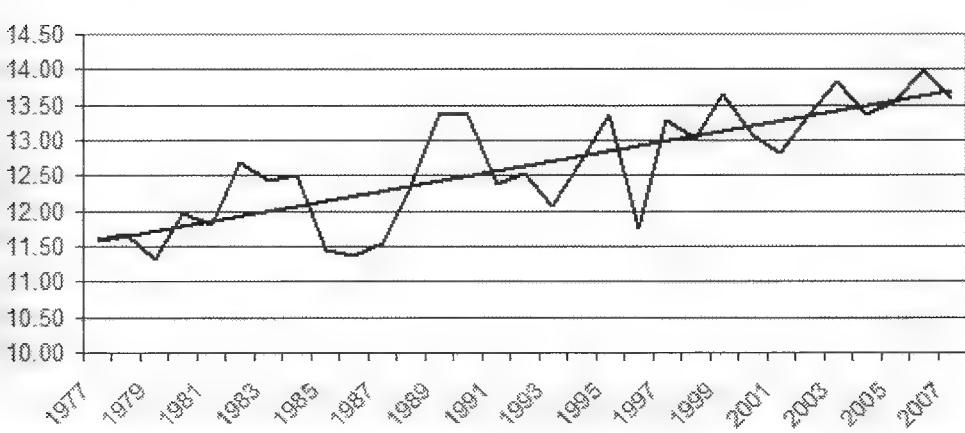


Figure 1. Average maximum daily temperature.

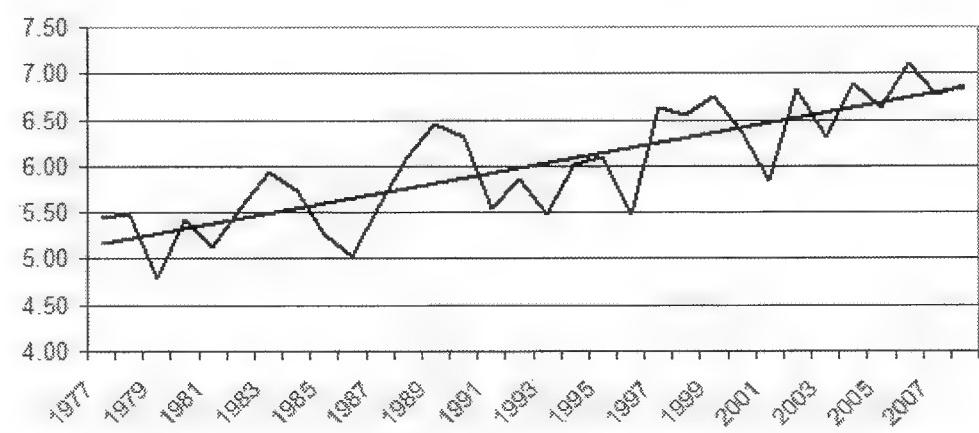


Figure 2. Average minimum daily temperature.

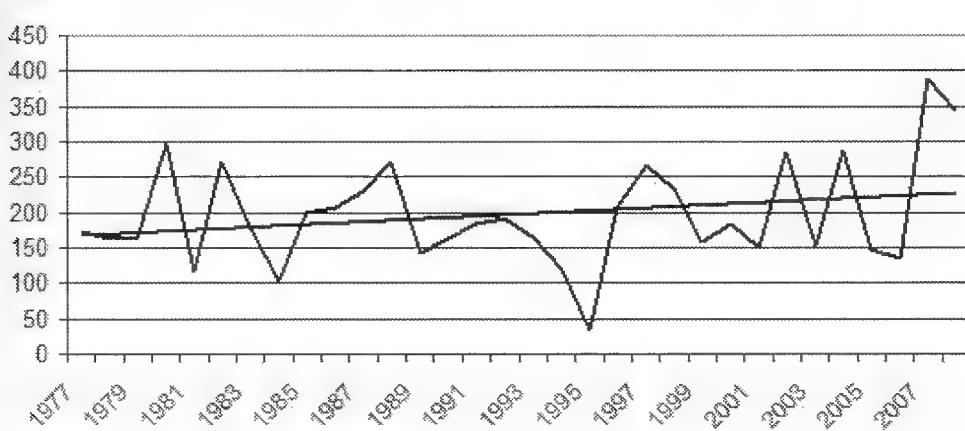


Figure 3. Summer rainfall.

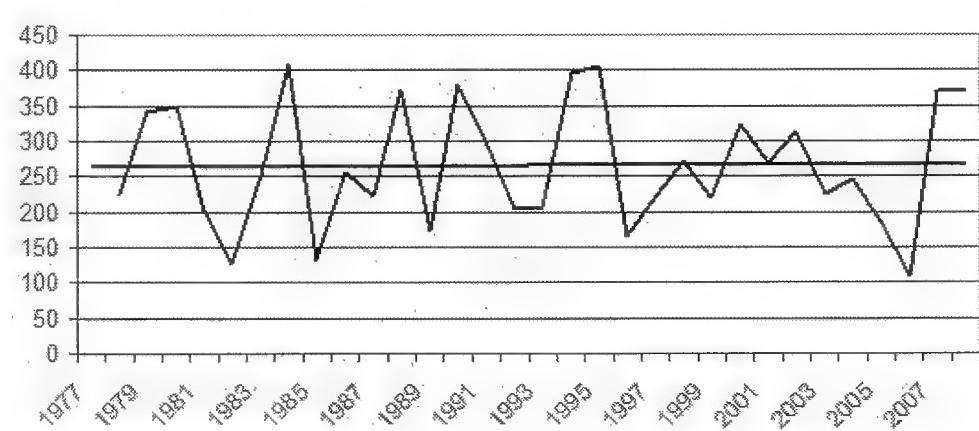


Figure 4. Winter rainfall.

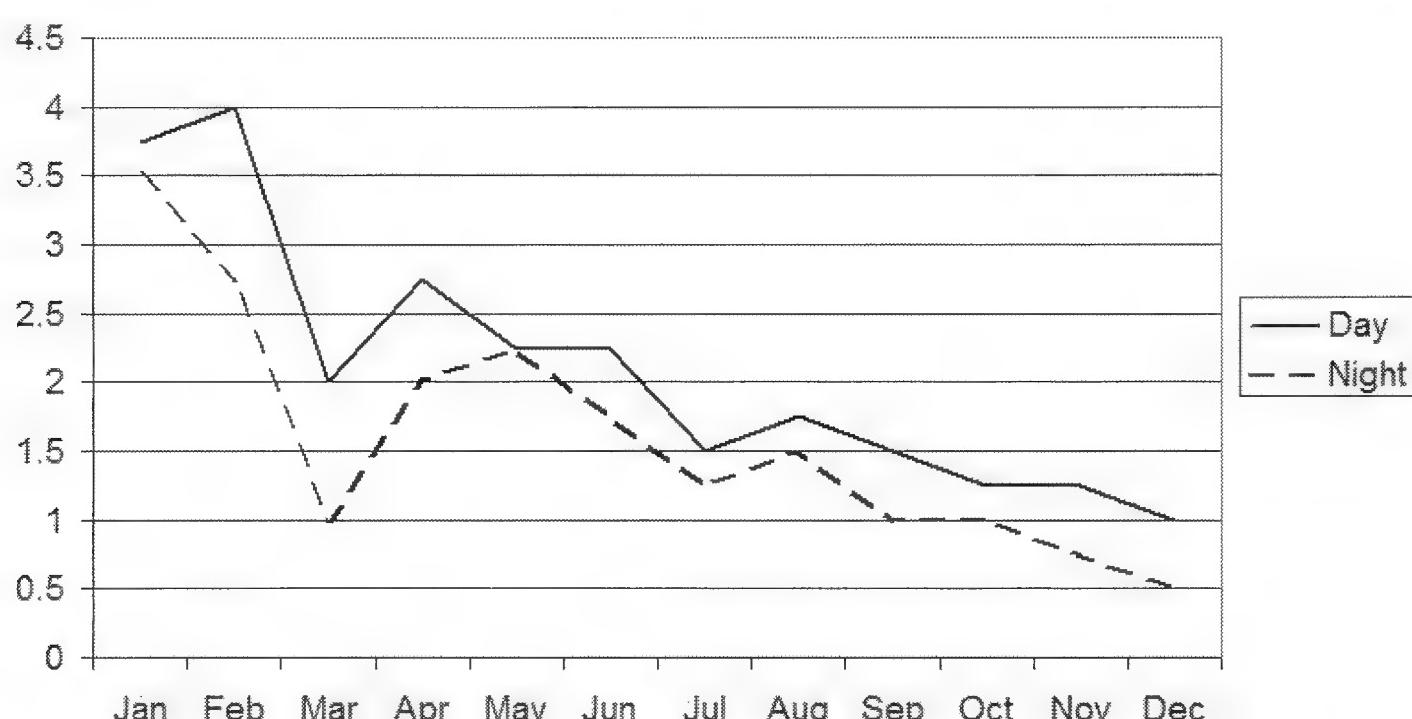


Figure 5. 30 year gain in tempeature by month.

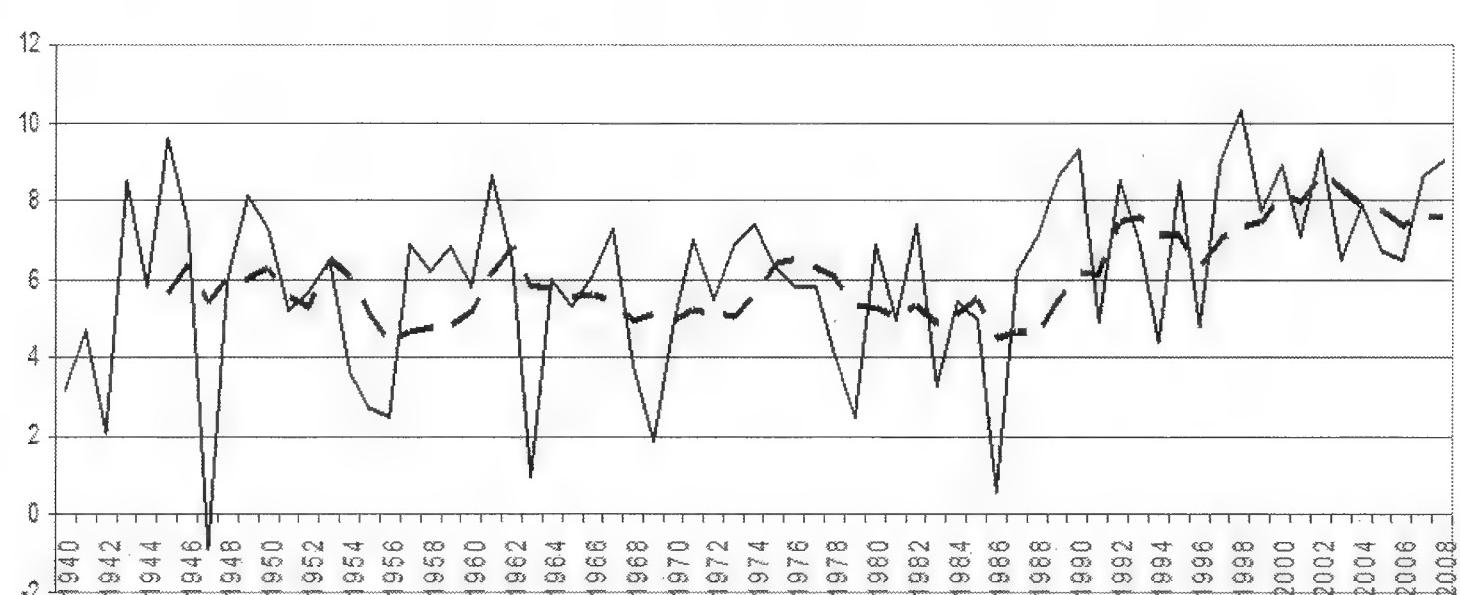


Figure 6. February temperatures with five-year rolling trend line (dashed line).

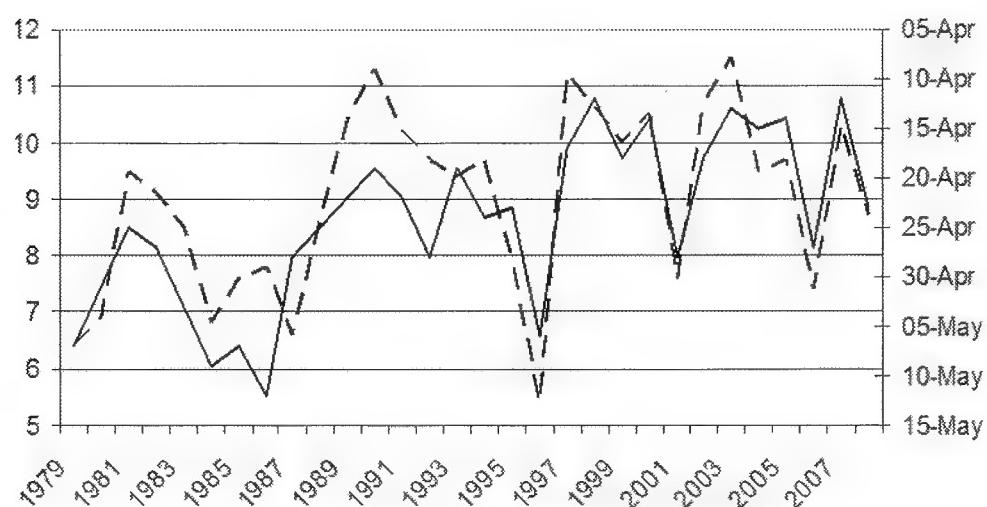


Figure 7. Hebrew Character flight time (solid line) against mean March daytime temperature (dashed line).

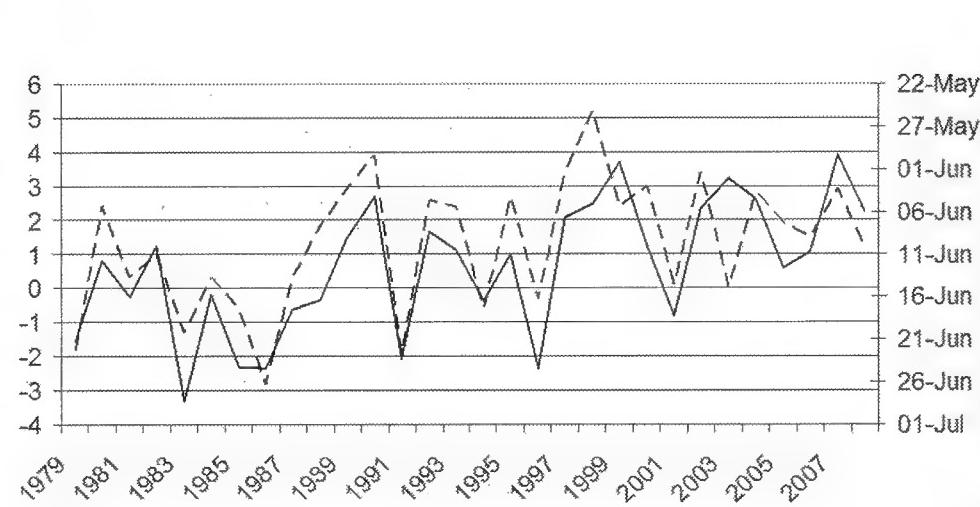


Figure 8. White Ermine flight times (solid line) against February mean night-time temperature (dashed line).

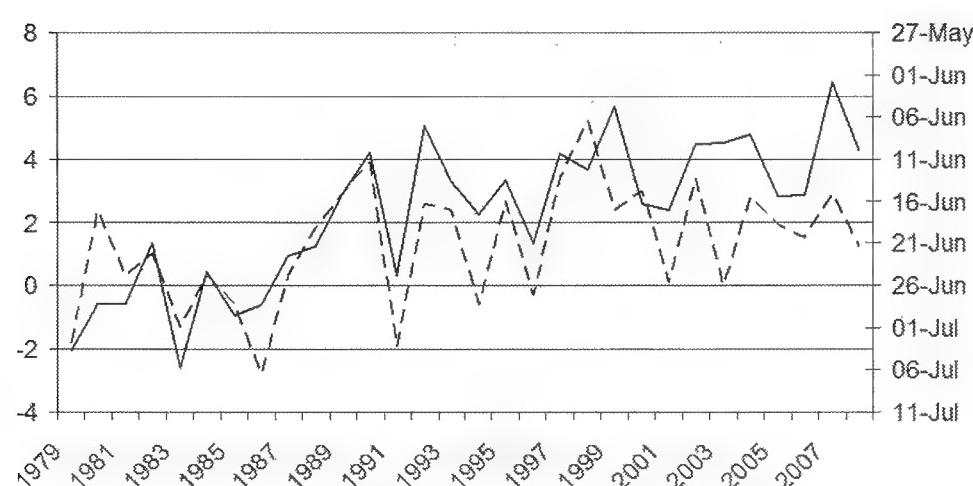


Figure 9. Rustic Shoulder-knot flight times (solid line) against mean July/Aug daytime temperature (dashed line).

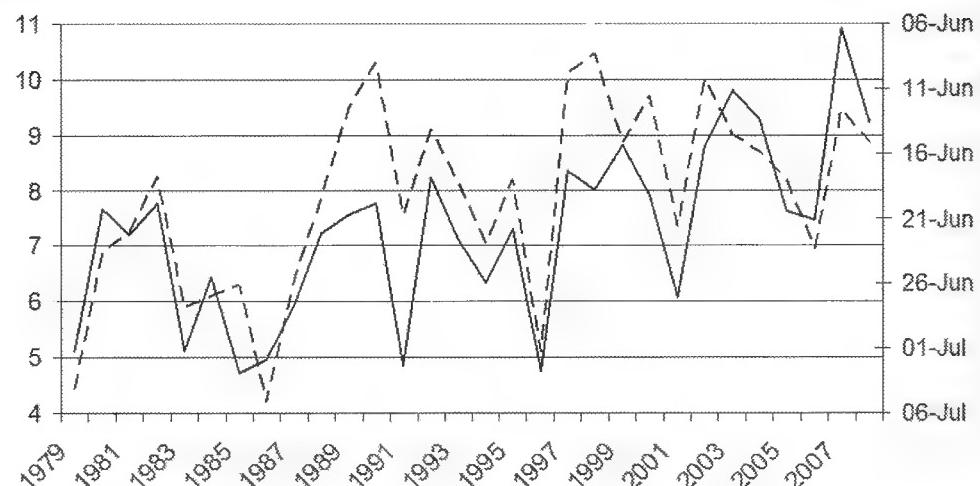


Figure 10. Silver-ground Carpet flight times (solid line) against mean Feb/March daytime temperature (dashed line).

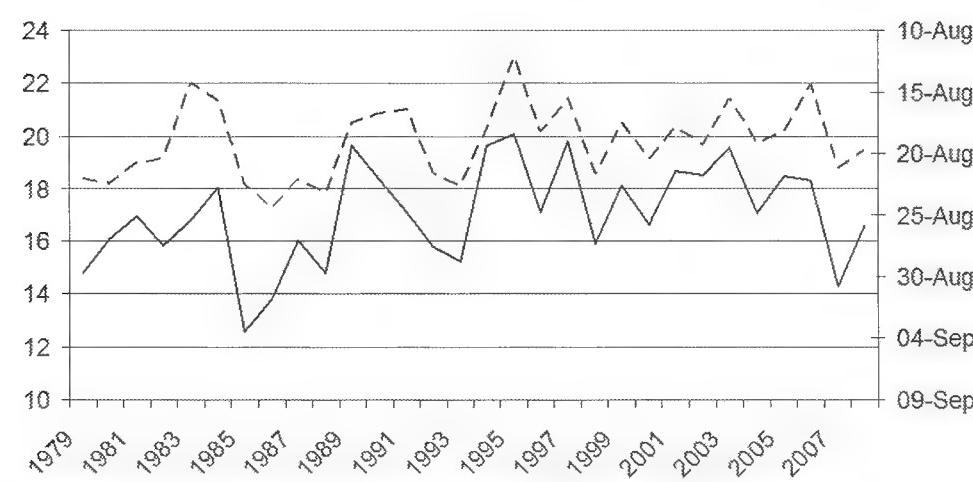


Figure 11. Flounced Rustic flight times (solid line) against mean July/Aug daytime temperature (dashed line).

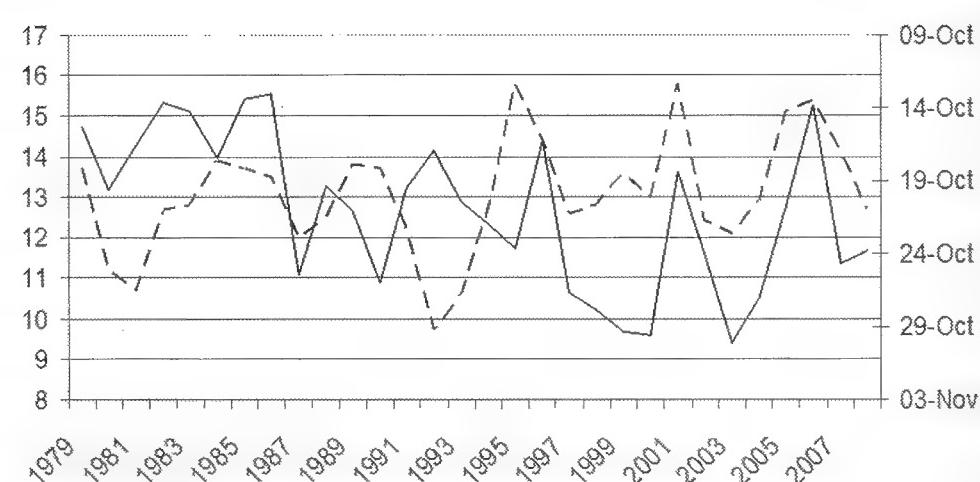


Figure 11. Feathered Thorn flight times (solid line) against mean daytime October temperature (dashed line).

Diapause is thought to be induced mainly by reduced day length, though falling temperature may also play a part. Termination of diapause in the spring to enter a state of increased activity is again thought to be initiated principally by increased day length, though it is difficult to see how a larva or pupa underground could respond to changing light levels.

Data from Yorkshire shows a dramatic correlation between flight times of spring moths and temperatures in early spring. If for example March is six degrees warmer than the previous year, this can result in mean flight times of Hebrew Characters being accelerated by almost a month. Peak flight time for Hebrew Character in Yorkshire has altered from the end of April (all records before 2000) to the middle of April (all records after 2000) but flight times show no correlation at all with daytime or night-time April temperatures. Flight time correlation with March temperatures is however almost perfectly matched, both using daytime temperatures and slightly less with night-time temperatures. Only 19% of all Hebrew Character records are before 1 April, so the assumption must be that warmer temperatures break the diapause and accelerate pupal development. This looks to be a more important factor than increase in day length.

More surprisingly, flight times of later-emerging moths in June cannot be linked with day or night-time temperatures in the month before emergence. Attempted correlation with May temperatures shows a very poor fit, and there is a much better fit with temperatures in February and March. The main effect of climatic change as we have seen is the 'early spring' effect and this seems to be controlling moth flight times well into the early part of summer. Larval diapause again appears to be broken by increased temperatures rather than increased hours of daylight and this is timed with the earlier leaf burst that results so the larvae can feed. The situation may be more complex than this and May temperatures must have some effect in encouraging a moth to hatch from its pupa. The only years which do not show a good 'fit' on the graphs for example 1999 and 2003 show a better correlation with May temperatures.

Late summer moths show no such surprise. The 'early spring' effect cannot be demonstrated this late in the year, and flight time correlates almost exactly with temperatures at the end of pupal development. The flight time of moths at the end of the year is much harder to explain and it is difficult to show a neat correlation with temperature at any part of the year. There is probably a mixture of factors at work here with both rising and falling temperatures playing a part in tandem with decreasing day length. More research needs to be done to explain what governs flight time in this group of moths.

Data from Yorkshire cannot be assumed to be typical of what happens in the rest of the UK. Weather patterns could be quite different and other regions may not show the dramatic spring warming combined with modest temperature increases later in the year that we have seen in the north of England. Similar studies in other parts of the country could be instructive. What we can say however is that a recent and sustained temperature increase at the beginning of

the year is the driving force behind the earlier flight times of most moths flying in the first half of the year in Yorkshire.

Acknowledgements

A county database of a million records represents a colossal amount of observer effort. Thanks must be given to all those individuals in Yorkshire who have recorded and continue to record moths and submit their records to the database.

This paper is based upon a talk given at the National Moth Recorders Conference in Birmingham on 31 January 2009.

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Data request – Moths in VC 47: Montgomeryshire

I wonder if I might ask readers to check through diaries and notebooks etc for any moth records that originated from Montgomeryshire, VC 47. I am currently in the process of creating a county database and I'm trying to gather in as much existing data as possible as a basis for future recording effort. Both macros and micros are included in the new recording effort. I would be delighted to receive data in any computer format or on paper.— PETER WILLIAMS, Montgomeryshire County Moth Recorder, Pandy, Commins Coch, near Machynlleth, Montgomeryshire (E-mail: peterwilliams526@btinternet.com).

***Hypena lividalis* (Hb.) (Lep.: Noctuidae) confirmed for the Bulgarian fauna**

Nowacki & Fibiger (1996. *Noctuidae*. – In Karsholt, O. & Razowski, J., (eds): *The Lepidoptera of Europe: A distributional Checklist*, 257) included *Hypena lividalis* as a member of the Bulgarian fauna, but as far as the present authors know this report is a supposition and is not based on any published report or examined specimens. According to Beshkov (2000. An Annotated Systematic and Synonymic Check List of the Noctuidae of Bulgaria (Insecta: Lepidoptera: Noctuidae). *Neue Entomologische Nachrichten* 49: 1-300), *H. lividalis lividalis* (Hb.) is known from Albania, the former Yugoslavia and from Greece and so probably will occur in Bulgaria, but the reference to this species in Nowacki & Fibiger (*op. cit.*) was treated as unsubstantiated. Later, Beshkov & Langourov (2004. *Butterflies and Moths (Insecta: Lepidoptera) of the Bulgarian part of Eastern Rhodopes*, p. 525-676. In: Beron P., Popov A., (eds). *Biodiversity of Bulgaria. 2. Biodiversity of Eastern Rhodopes (Bulgaria and Greece)*). Penssoft & Nat. Mus. Natur. Hist., Sofia), reported the unpublished capture of *Hypena lividalis* as a new species for Bulgaria from Madjarovo, where one was reportedly taken in a light trap on 7 August 2003. The light trapping session was conducted as part of an ‘eco-tour’ during which no collecting of specimens was permitted, but the moth was recognized by Peter Davey (Dorset, England). Beshkov & Langourov (*op. cit.*) treated the identification as probably correct, because the moth is distinctive. However, a confirmation of this species as Bulgarian was urgently needed.

We were therefore extremely pleased to capture a single male *H. lividalis* whilst on a collecting trip in south-west Bulgaria during October 2008, in the company of Phil Jenner, Balázs Benedek and Tamás Hácz. On the night of 19 October 2008, we operated five actinic and two black light traps (powered from 12 volt batteries), plus one light tower and three Skinner-pattern traps powered from generators from dusk to daylight at Kozhoush, near the town of Petrich (**Plate 12**). Several ‘wine ropes’ were also put out. A single male *H. lividalis* arrived at one of CWP’s Skinner traps between 02.00 hours and daylight. The full data are:

BULGARIA: Volcanic Hill ‘Kozhoush’ (near Petrich), below the quarry, 41°27'36"N: 23°15'19"E, UTM Code: FL98, 185 metres, 19.x.2008. Leg. C. W. Plant & S. Beshkov. In coll. C. W. Plant (**Plate 13**).

The site is relatively well-explored. The volcanic Hill of Kozhoush is one of the several hills surrounding Rupite, which is a remnant of a volcanic crater. The relief is hilly and there are several rare plant species such as *Parvotricetum myrianthum*, *Amygdalus webbii*, *Dracunculus vulgaris*, and *Colchicum bivonae*. Large parts of the territory are covered by *Paliurus spina-christi* and *Juniperus oxycedrus* bushes. Small parts are covered by deciduous forests, mainly composed of *Quercus pubescens* and *Q. virgiliiana* with Mediterranean elements. There are single groups of *Pyrus amygdaliformis*, *Pistacia terebinthus*, *Acer monspessulanum* and *Ulmus* trees.

Julius Ganev (1984. Die Schmetterlingsfauna des Vulkanhügels Kozuch in Südwest-Bulgarien (Lepidoptera: Macrolepidoptera). *Phegea* 12(4): 121-136) recorded 681 Macrolepidoptera species (without Psychidae and Sesiidae). Several additional species, including some new for the country, have been added to that list during the last two decades. However, most of Ganev's collecting was undertaken on the opposite side of the hill at a lower altitude, towards Rupite, where he was able to get a 'plug-in' for his lamps. Taken together, Rupite and Kozhouh (Malak Kozhouh), present one of the most important sites for Lepidoptera in the whole of Bulgaria. Abadjiev & Beshkov (2007. *Prime Butterfly Areas in Bulgaria*. Pensoft), classify the site as a 'Prime Butterfly Area' and list several 'target species', namely *Thymelicus acteon*, *Zerynthia polyxena*, *Pieris ergane*, *Lycaena dispar*, *Pseudophilotes vicrama*, *Hipparchia semele*, *Apatura metis* and *Melitaea trivia*. Synchronic and syntopic species of moth include *Triodia adriatica*, *Eriogaster catax*, *Lemonia taraxaci strigata*, *Xanthorhoe oxybiata*, *Diachrysia stenochrysis*, *Praestilbia armeniaca*, *Proxenus hospes*, *Atethmia ambusta*, *Agrochola wolfschlaegeri*, *Episema korsakovi*, *Dryobotodes carbonis*, *Dryobotodes tenebrosa*, *Hecatera cappa*, *Agrotis obesa scitha*, and *Agrotis syricola*. Other elements of the moth fauna include some extreme rarities and several Balkan endemics, such as *Lamellocochus terebra*, *Phyllodesma ilicifolia*, *Saturnia spinii*, *Proserpinus proserpina*, *Erynnis marloyi*, *Gegene nosstrodamus*, *Pieris krueperi*, *Anthocharis gruneri*, *Tarucus balkanica*, *Hyponephele lupina*, *Archiearis puella mediterranea*, *Nychiodes dalmatina*, *Erannis declinans*, *Chemerina caliginearia*, *Apochima flabellaria*, *Comibaena neriaria*, *Oulobophora internata*, *Idaea determinata*, *Acronicta cuspis*, *Cryphia tepocharis*, *Cryphia burgeffi*, *Macrochilo cibrumalis*, *Hypenodes anatolica*, *Catocala separata*, *Metachrostis velox*, *Metaegle pallida*, *Cucullia scopariae*, *Amephana dalmatica*, *Asteroscopus syriaca decipulae*, *Pyrrhia treitschkei*, *Chilodes maritima*, *Agrochola gratiosa*, *Agrochola rupicapra*, *Agrochola osthederi*, *Mniotype solieri*, *Polymixis trisignata*, *Dryobota labecula*, *Analetia riparia*, *Meganola gigantula*, *Thumatha senex*, *Pelosia obtusa* and *Euplagia quadripunctaria*.

The region is of outstanding ecological importance within a European context and is both a NATURA 2000 and a CORINE Site. Regrettably, however, the last several years have been characterised by intensive construction works, most of which have not taken into consideration the natural value of the areas and which have caused immense ecological damage. There are illegal dumping grounds in many places. The hot mineral springs and Baba Vanga's temple in Rupite are the reason for increased human presence, especially during weekends and holidays and this has necessitated the creation of a new building infrastructure, which is likely have further negative impact. During 2008, an 'eco path' was built from the mineral spring to Rupite village using the money from the PHARE program. This 'eco-path' was introduced without any form of Environmental Impact Assessment and has destroyed a large part of the ecological interest as well as damaging several archaeological sites. The ridiculous design (**Plate 14**) renders the



Plate 12. The trap site for *Hypena lividalis* (Hb.) at Kozhouh, Bulgaria, 19.x.2008.
(Photograph S. Beshkov)



Plate 13. *Hypena lividalis* (Hb.) Kozhouh, Bulgaria, 19.x.2008. (Photograph C. W. Plant)



Plate 14. The 'eco-path' at Rupite. Carved through primary habitat without any prior impact assessment it has caused immense ecological damage. The sunken centre and steep marginal walls combine to make the path lethal to tortoises and an array of other animals that fall into it. (Photograph S. Beshkov)

'eco-path' a giant, linear pitfall trap and during the summer of 2008 many animals, particularly tortoiseses, were found dead, having been unable to escape. The latest threat is the proposed erection of a giant religious cross on the top of Kozhuh Hill; as if that was not bad enough it will be accessed via steps that start at Rupite and run up the entire slope of the hill more or less at the centre of the photograph in Plate 14.— STOYAN BESHKOV, National Museum of Natural History, 1 Tsar Osvoboditel Boulevard, 1000 Sofia, Bulgaria (E-mail: beshkov@nmnh.bas.bg) & COLIN W. PLANT, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (E-mail: cpauk1@ntlworld.com).

The possible arrival of *Cameraria gaultheriella* (Walsingham) (Lep.: Gracillariidae) in Britain

On 21 December 2008, my wife purchased a bunch of cut flowers (chrysanthemums, dahlias and roses) from our local Tesco superstore in Aylesbury, Buckinghamshire. The flowers were left in water for two days before being arranged in a vase so it was not until the 23 December that I noticed a damaged leaf amongst the detritus that had been excluded from the display. The leaf was from some 'greenery' accompanying the flowers and it was clear to me that the damage to it had been caused by a mining insect (Plate 15).

A closer inspection of the mine confirmed that the culprit was still present, lepidopteran and still alive. Since neither moth nor plant species was immediately apparent, I placed some digital images on the 'UK Leafminers' Yahoo e-group in the hope that someone might be able to identify one or both and was pleased to find that there was agreement from a handful of respondents that the leaf was from the ericaceous plant *Gaultheria shallon* (known as Salal) and that the mine was that of *Cameraria gaultheriella*, a species native to North America.

Robert Homan contacted me to mention that back in March 2007 he had found a similarly damaged leaf of Salal in a bunch of flowers purchased from a supermarket in Cheltenham, Gloucestershire; this appears to be the first UK sighting of the mine. The Gloucestershire larva had stopped developing and photographs of the leaf suggested that the larva must have died at a relatively early stage. From contact with Eric LaGasa, Chief Entomologist of Washington State's Department of Agriculture in Olympia, Robert was able to ascertain that only *Cameraria gaultheriella* and *Eucalantica polita* (Walsingham) (Lep: Plutellidae) are pests of Salal in the north-western USA and that the larvae of the latter species are 'skeletonisers' rather than 'miners'.

Salal is harvested in the north-western USA and Canada for export and is widely used in flower arrangements. Although the flowers from my local Tesco will probably have been sourced from the Netherlands, the Salal used for 'greenery' will have been imported from North America by the Dutch wholesaler. My e-group enquiry actually elicited two responses from the Netherlands, one of which came from Erik van Nieukerken who reported that he had twice found mines of *Cameraria gaultheriella* on Salal in bunches of flowers purchased in his native country but that, so far as he was aware, no-one had yet succeeded in rearing the adult moth in Europe.

On the advice of John Langmaid I kept the leaf in an air-tight plastic container along with some moss and remained hopeful that I might be able to see the specimen through to the adult moth. The larva was checked every three or four days and it continued to feed actively for at least three weeks. However, from 19 January 2009 onwards I was unable to locate it within the mine and there was no obvious exit hole. By that date the leaf had become quite desiccated and I can only assume that the larva died once the leaf became too dry to provide nourishment. If the leaf had not been plucked from the main stem I might have been successful. Cut Salal appears to be quite long-lived if kept in water

retained a stem from the original flower arrangement and the leaves showed no sign at all of deterioration after six weeks and only very slight deterioration after eight weeks). It must therefore be possible to rear the adult moth if an active mine is discovered, so it is well worth keeping an eye open for mines at your local florist or supermarket.



Plate 15. Larval mine of *Cameraria gaultheriella* in a leaf of *Gaultheria shallon*.

Salal was introduced to the British Isles in the 1800s as an ornamental plant, but has escaped into the wild in some areas (notably in south-east England and in Scotland) and can be quite an invasive species, so there would seem to be potential for *Cameraria gaultheriella* to become established here one day.—DAVE WILTON, 25 Burnham Road, Westcott, Aylesbury, Buckinghamshire HP18 0PL (E-mail: wilton@burnhamlodge.plus.com).

Aberrant genitalia of *Elachista humilis* (Zell.) (Lep.: Elachistidae) and *Agrotis segetum* (D. & S.) (Lep.: Noctuidae)

Recent dissections undertaken have revealed two rather odd instances of disfigurements in the genitalia of two species of Lepidoptera. The first was *Elachista humilis* taken by Dave Grundy at Doxey Marshes, Staffordshire (VC39) on 24 June 2006. External features of the moth suggested this species in showing the forewing colour being all dark with a pale mark on the costa near the apex and a similar one on the dorsum opposite. The genitalia also suggested this species in showing fairly small but widely spaced uncus lobes, a club shaped digitite process with wide juxta lobes and an aedeagus showing a bulbous base and several small cornuti. All fitted perfectly except the saccus. Rather than being stout and blunt tipped it showed a curious and well defined forked tip (Plate 16), something I have never seen before in this genus and am not aware of any species of *Elachista* that shows this ornamentation.



Plate 16. Aberrant male genitalia of *Elachista humilis*, Doxey Marshes, Staffordshire, 24.vi.2006.

The second instance of genitalia disfigurement was shown in an example of *Agrotis segetum* taken by Steve Mills at Gunthorpe, Norfolk (VC28) on 14 July 2008. The moth was of a very ochreous form and initially I was not going to dissect but thankfully I did as like the preceding species, most features matched other than a bizarre double ampulla in the right valva. The right valva itself appearing considerably broader than the left valva. Again, I have never seen anything like this before and sent images to Michael Fibiger who commented that he does know of double parts in the genitalia in a few cases but is a very rare instance.

My thanks go to Michael Fibiger for comments on the *Agrotis* and to Lauri Kaila, Martin Honey and Brian Goodey for commenting on the *Elachista*.— JON CLIFTON, Kestrel Cottage, Station Road, Hindolveston, Norfolk NR20 5DE (Email: Jon.Clifton@btinternet.com).

Treble Brown Spot *Idaea trigeminata* Haw. (Lep.: Geometridae) in October

On approaching the doorway of my place of work in Solefields Road, Sevenoaks, Kent (VC 16), on the morning of 9 October 2007, I was surprised to find close by a light that had been left on overnight a fresh specimen of the Treble Brown Spot *Idaea trigeminata*. This was clearly an example of either an exceptionally late emergence or, more likely, a second generation insect. The moth is a common feature of the mid-Summer in the Sevenoaks – Tonbridge – Tunbridge Wells area, coming to light but also being found readily by day well exposed on vegetation, between late May and late July so the October example was well outside normal season limitations. A quick skim through various county faunas failed to reveal any examples of autumnal emergence though the search was not exhaustive. However it is clear that this species is not regarded as one of those moths that may produce an occasional second generation insect. However with the warming of the climate a number of moths now produce an autumnal generation more regularly and more numerously than in the past (e.g. Green Carpet *Colostygia pectinataria* Knoch) so it is likely that other species, not normally known for out-of-season moths, may start to produce at least an occasional autumn example. I should be very pleased to hear of any other autumnal specimens of this species that have been observed.— KEITH PALMER, Farthing House, Needles Passage, 40a The Mint, Rye, East Sussex TN31 7EN.

Peacock *Inachis io* (L.) (Lep.: Nymphalidae) flying over snow fields in Staffordshire during February

During recent mild winters the Peacock butterfly *Inachis io* has been recorded on the wing as early as January/February in some parts of Britain, mostly in the south. On 4 February 2009, a bright and sunny day, but with the temperature only just above freezing point and with snow laying on the ground, I was surprised to see a Peacock butterfly on the wing here at Meir. It arrived from an easterly direction and landed on the path in front of me, whereupon it promptly began to investigate the snow with its proboscis. It may have been simply drinking, or it may have been taking on board minerals or other nutrients contained within the snow, such as salt (sodium chloride) which had been spread in some areas.

Of course, the insect may well have been awoken from hibernation artificially, by someone turning up the central heating in response to the snowy weather. However, South (1906. *The butterflies of the British Isles*. Warne) states that whilst March and April are the usual months for this species, it was seen flying over snow on 17 February 1900. Moses Harris, writing in *The Aurelian* in 1778, wrote 'I have seen them flying in February when the snow has been on the ground'. Frowhawk (1934. *The complete book of British butterflies*. Ward Lock) records that this butterfly 'occasionally makes its appearance in the winter

months during fine, warm spells of weather and in exceptional cases when snow covers the ground. Some years ago, one was seen on the wing at St Tudy, Cornwall, when snow four inches deep covered the ground'.

My own observations suggest that some Peacocks are on the wing in the autumn until late September and sometimes into early October whilst many take up winter quarters as early as mid-August. I have found them in sheds and old air-raid shelters in the past. Perhaps it is these early hibernators that wake up early in need of nutrition – ahead of those that fed into the autumn?— JAN KORYSKO, 11 Doris Robinson Court, Viscount Walk, Meir, Staffordshire ST3 7TR.

A profusion of *Blastobasis adustella* (Walsingham) (=*ligneata* (Walsingham)) (Lep.: Blastobasidae) at MV light in Middlesex during August 2008

It is generally agreed that 2008 was a poor season for moths in southern Britain (and probably elsewhere in the British Isles), with relatively low summer temperatures and high summer rainfall, following on from similar conditions in 2007. Plant (2008, *Ent. Rec.* 120: 133-138) presents data suggesting that numbers of the vast majority of species were exceptionally low from April-June 2008, from a garden light trap at Bishops Stortford, Hertfordshire. Anecdotal personal observations support this trend and suggest that the situation did not improve later in the year. However, a minority of species appear to have fared better than usual, at least locally, perhaps because they are adapted to wetter conditions. On 6 August 2008, I ran two 125 watt Robinson-pattern MV light traps in Mad Bess Wood, part of Ruislip Woods Site of Special Scientific Interest (SSSI) in Middlesex, from dusk until dawn, as part of work on monitoring the condition of woodland SSSIs for Natural England and Butterfly Conservation. The habitat is Hornbeam *Carpinus betulus* coppice with oak *Quercus* standards. Apart from narrow, grassy rides, it is very shady and herbaceous vegetation is generally rather sparse, with dominant bramble or Bracken *Pteridium aquilinum* in places. By far the commonest species of moth was *Blastobasis adustella*, with approximately 1500-2000 individuals in total (an estimate obtained by counting moths on several egg-trays in each trap and multiplying up). I frequently see this species in light traps in various places and habitats, but not previously in such profusion, single figures per trap being more typical.

Conditions were good for light trapping. The night was still and cloudy after a warm, humid day, temperature at dusk 18°C, at dawn 14.5°C. The vegetation was dry and there was no precipitation. In spite of this, the remainder of the catch was remarkably ordinary. 'Macros' and Pyralidae s. l. numbered 126 (35 species) and 117 (25 species) respectively in the two traps, and all were common or very common species. The next most numerous species was Dingy Footman *Eilema griseola* (Hb.) with 39 individuals. 'Micros' other than *B. adustella* were also in only moderate numbers.

The biology of *B. adustella* is summarised in volume 4 of *The Moths and Butterflies of Great Britain and Ireland* (Harley Books, 2002). It is thought to have been introduced from Madeira (where the nearest known population exists) in the early 20th century. It now occurs throughout most of the British Isles, the larvae feeding on decaying leaves and a wide variety of other vegetable matter, and can be hugely abundant in yew woodland. Evidence appears to suggest that in this habitat, eggs are laid on the tree where the larvae feed on the foliage, and larval development is completed on decaying leaves in the leaf litter, where pupation occurs. There is no yew woodland in the vicinity of the trapping sites at Ruislip, but much of the habitat is similarly shaded (at least for part of the year) with abundant leaf litter, and it seems likely that a large population is present. However, *B. adustella* has been noted as having been seen in larger than usual numbers elsewhere in the London area in 2008, although such numbers are exceptional (Colin Plant, pers. comm.). Alternatively, high summer rainfall may simply favour it. Interestingly, in Madeira it occurs most abundantly in the humid subtropical laurel forest in the northern and central parts of the island, especially from 600-1400m (Karsholt, O. and Sinev, S.Y. 2004, Contribution to the Lepidoptera fauna of the Madeira Islands Part 4. Blastobasidae. *Beiträge zur Entomologie* 54: 387-463). At these altitudes, annual rainfall is more than 1800mm. By contrast, Funchal in the south of the island receives 650mm.

It would be interesting to hear of other occurrences of *B. adustella* in unusual abundance in 2008, in south-east England or elsewhere. I would like to thank Martin Corley (information from Madeira), David Green (lead consultant), Paul Losse (Natural England) and Stuart Hunt and Richard Hutton (Hillingdon Borough Council).— MARTIN TOWNSEND, 69 Alice Smith Square, Littlemore, Oxford OX4 4NQ (E-mail: martin.townsend4@ntlworld.com).

Tachinid fly larva found in the abdomen of an adult *Melitaea deione* Geyer (Lep.: Nymphalidae)

A few years ago, when dissecting the genitalia of a male *Melitaea deione*, I was amazed to find in the abdomen contents a small fly larva skin, fusiform in shape and of about 2 mm length. As I was not expecting it to be there, the posterior segments of the larva were badly damaged by rude manipulation, so no spiracular processes can be observed. The cephalopharyngeal skeleton is intact and, in lateral view, extends forward with a hook. This fact places the larva as belonging to the family Tachinidae (Diptera).

Tachinid flies that are parasitoids of Lepidoptera are known to attack only the larval stages, not adult butterflies or moths. With this in mind, I can only suppose that the larva died before doing any major damage to his host caterpillar, which was able to survive to the adult stage. Data on the *M. deione* specimen label is: Cimbres, Armamar, Portugal. UTM 10x10 km 29TPF04. 25/VIII/1974. — FERNANDO SANTOS CARVALHO, Av. Est. Un. América, 130, 10º Esq., 1700-180 Lisboa, Portugal (E-mail: fvscarvalho@netcabo.pt).

THE SPREAD OF PALE PINION *LITHOPHANE HEPATICA* (CLERCK) (LEP.: NOCTUIDAE) INTO THE NORTHERN HALF OF ENGLAND AND SCOTLAND SINCE 1990

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Abstract

Pale Pinion *Lithophane hepatica* has expanded its range over 250 km northwards in Britain since 1990, and also spread eastwards. Twenty-three new vice-county records are presented here. We suggest that south-west Scotland and the far north-west of England were initially colonised from Northern Ireland or the Isle of Man.

Keywords: Lepidoptera, Noctuidae, *Lithophane hepatica*, Northern England, Scotland, Range Expansion.

Introduction

Pale Pinion *Lithophane hepatica* (*socia* Hufnagel) has previously been considered a local moth of woodland in the south and west of the British Isles. The distribution map for this species in Heath & Emmet (1983) gives records up to 1980; nearly all are southwest of a line from the Thames estuary to the Mersey, with the few scattered records in eastern England presumed to represent strays or migrants. Its then northern limit in mainland Britain was the coast of north Wales and the Wirral of Cheshire, though it was present throughout Ireland and in the Isle of Man. On the east, the most northerly record was in North Lincolnshire.

Thus it was a surprise when Pale Pinion was recorded in south-west Scotland in 1996, especially when further sightings soon followed. Even at a time when many species are advancing northwards due to climate change, this seemed a remarkably sudden and dramatic range expansion, roughly 200km beyond its previous limit in mainland Britain. Had Pale Pinion arrived in Scotland by migration, or had its range expansion been more gradual, moving up through northern England? In an effort to answer this question, RL contacted SP to ask about the moth's status in the two Lancashire vice-counties. It was indeed a recent arrival. Subsequently, the authors contacted the recorders for other northern Watsonian vice-counties to build up a fuller picture of its distributional changes.

Results

An excellent response was received from the vice-county recorders and from individual observers. No less than 23 reported the first vice-county record of Pale Pinion during the period in question, others a considerable increase in numbers and sites. None reported a decline. In the following list, first vice-county records since 1990 are given in bold. Seven were in autumn and 16 in spring, but whether

this is due to the moth's habits or the observers' trapping methods is unknown. Some recorders provided additional information, which is summarised here.

VC53 South Lincolnshire (C. Smith)

First record: Grimsthorpe Park, 23 September 1998 (C. Howes)

VC54 North Lincolnshire (C. Smith)

A significant expansion from 2006 onwards in areas worked in previous years.

VC55 Leicestershire (A. Russell)

Increase noted from 1996 onwards, particularly after 2001; now fairly common.

VC56 Nottinghamshire (S. Wright)

First record: 11 April 2006, Lound Wood, Eakring (T. & D. Pendleton).

Subsequent records from a further eight sites.

VC57 Derbyshire (D. Budworth)

First record: 1 April 1990, South Darley, Matlock (F. Harrison).

Significant increase from 2003 onwards.

VC58 Cheshire (S. Farrell)

Expansion of range from 1986 and particularly after 1999, though still local.

VC59 South Lancashire (C. Darbyshire)

First modern record: 21 October 1996, Woolton, Liverpool (S. E. McManus)

Thereafter spread eastwards, reaching Manchester by 1999.

VC60 North Lancashire (C. Darbyshire)

First record: 7 April 1993, Leighton Moss (L. Ball).

Thereafter spread eastwards up the Lune valley.

VC61 South-east Yorkshire (per C. H. Fletcher)

First record: 5 May 2004, Rudston (T. Ezard).

VC62 North-east Yorkshire (per C. H. Fletcher)

First record: 11 April 2004, Hutton Rudby (G. W. Follows).

VC63 South-west Yorkshire (per C. H. Fletcher)

First record: 17 March 2002, Shillbank, Mirfield (M. Tordoff).

VC64 Mid-west Yorkshire (C. H. Fletcher)

First record: 5 May 1996 Low Bentham (T. M. Whittaker).

VC65 North-west Yorkshire (C. H. Fletcher)

First record: 21 April 2003, Hutton Conyers (C. Fletcher).

VC66 Durham (T. Coulter)

First record: 12 April 2003, Stainton Village (D. Kipling).

Thereafter records from five more sites by 2008.

VC67 South Northumberland (K. Regan)

First record: 22 April 2004, East Farnley Grange (M. Greene).

Thereafter spread rapidly eastwards along Tyne valley into coastal plain.

VC68 North Northumberland (K. Regan)

No records by end of 2008.

VC69 Westmorland (S. Hewitt)

First record: 5 November 1994, New Hutton, Kendal (R. Petley-Jones).

Thereafter widespread.

VC70 Cumberland (S. Hewitt)

First record: 2 April 2004, Bassenthwaite (R. & K. Hodgson).

VC72 Dumfries-shire (per M. Pollitt)

First record: two, 7 October 2000, Connansknowe, Kirkton, (R. & B. Mearns).

Two more there, 30 October 2006.

VC73 Kirkcudbrightshire (per M. Pollitt)

First Scottish record: 24 September 1996, Southwick Coast SWT (P. Norman).

Thereafter about 10 more records.

VC74 Wigtownshire (per M. Pollitt)

First record: 20 April 2002, Carsegowan Moss SWT (P. Norman).

10 May 2007 Garlieston (J. Childs).

VC75 Ayrshire (N. Gregory)

First record: 27 March 2007, Balbeg (N. Gregory).

19 April 2007, Minishant (D. Smith).

VC76 Renfrewshire (N. Gregory)

First record: two, April 2007, Lochwinnoch RSPB (per N. Gregory).

VC80 Roxburghshire (A. Fitchett)

First record: 1 April 2005, Denholme Mill (N. Cook).

Six more at various sites in 2008.

VC84 West Lothian (G. Fitchett)

First record: 5 November 2008, Philipstoun Muir (M. Cubitt).

VC100 Clyde Isles

First record: 6 May 2008, Arran (J. Baines)

24 September 2008, Bute (G. Collis).

VC112 Shetland

First record: 19 September 2000, Eswick (T. D. Rogers)

Regarded as a migrant.

Discussion

Figures 1 to 4 show that the range expansion of Pale Pinion was more complex than a straightforward northward advance. Instead, the colonisation of northern Britain seems to have been a two-pronged process. We suggest that south-west Scotland, Cumberland and North Lancashire were colonised during 1993-96 by moths from across the Irish Sea. At that time, their nearest populations of Pale Pinion were in the Isle of Man and in Northern Ireland, both only about 30kms from the Scottish coast. Such a short sea crossing is unlikely to prove a barrier to this species, as evidenced by the migrant on Shetland in 2000. Significantly, Pale Pinion records in the Isle of Man increased from 1995 (I. Scott, pers. comm.), likewise in Northern Ireland from 1996, especially from 1997 onwards (T. Rolston, pers. comm.).

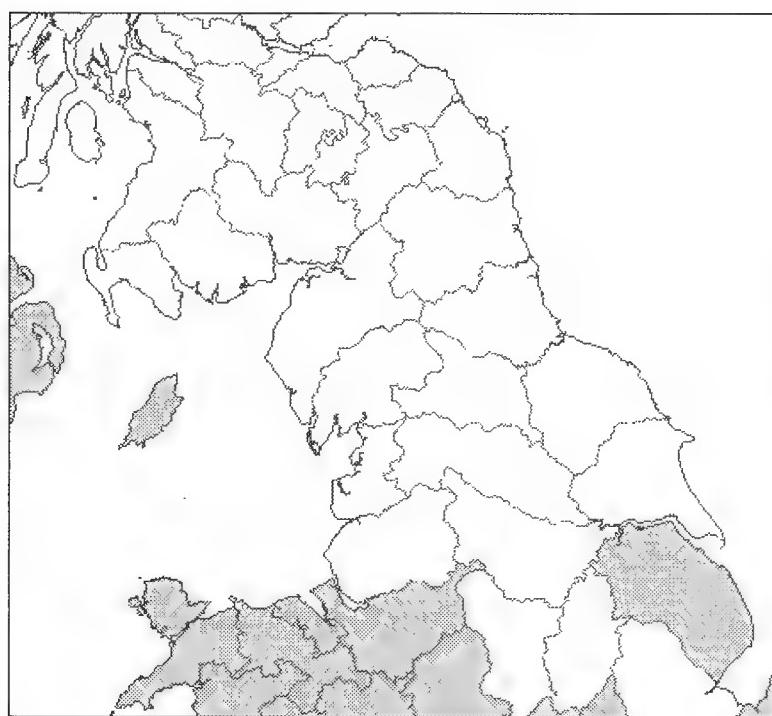


Figure 1. Pre-1990 northern limit of Pale Pinion *Lithophane hepatica* by occupied Watsonian vice-county.

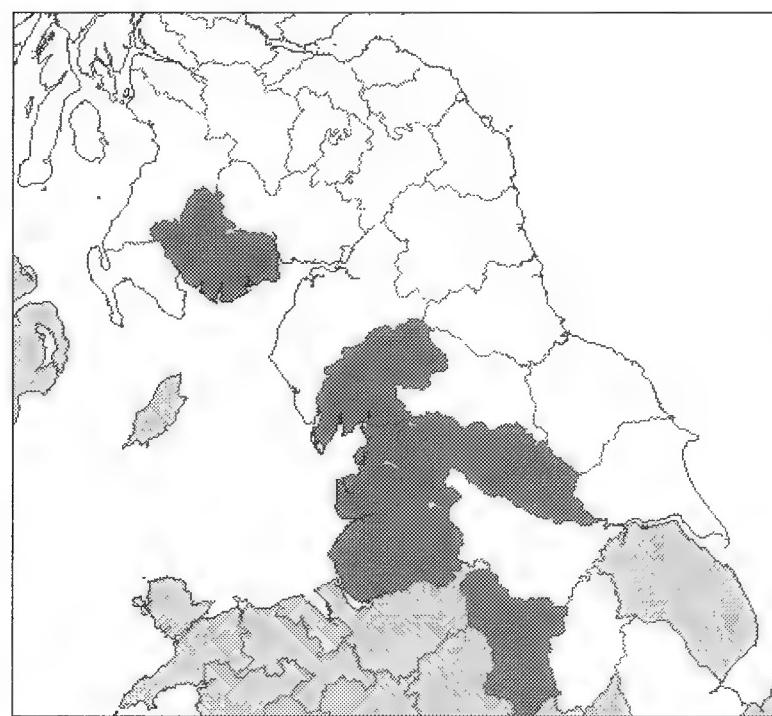


Figure 2. 1990-1996. Range expansion of Pale Pinion *Lithophane hepatica* by occupied Watsonian vice-county.

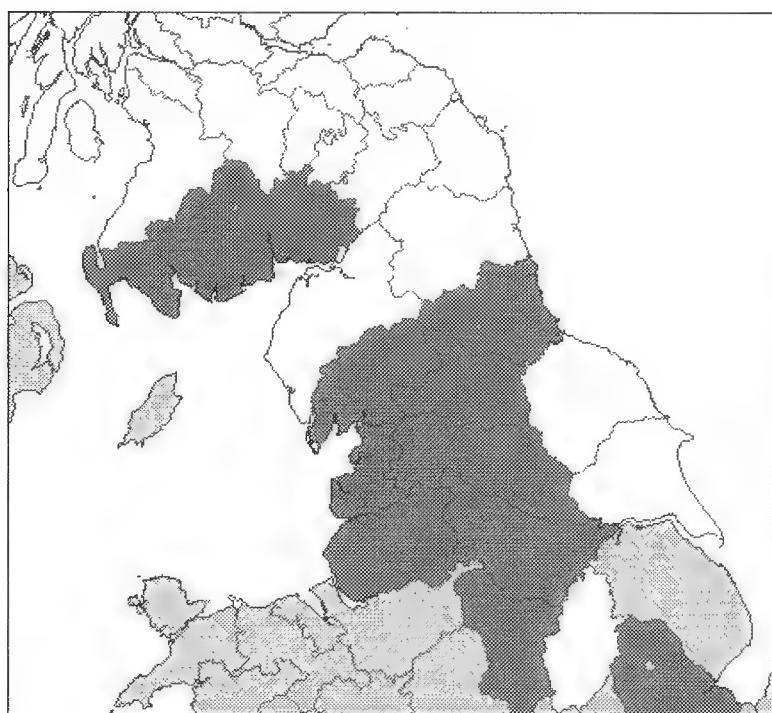


Figure 3. 1990-2003. Range expansion of Pale Pinion *Lithophane hepatica* by occupied Watsonian vice-county.



Figure 4. 1990-2008. Range expansion of Pale Pinion *Lithophane hepatica* by occupied Watsonian vice-county.

At the same time, Pale Pinion was extending northwards and eastwards in southern and central Britain. The process began earlier than the period covered by this paper. The first record for Warwickshire was not until 1984 but the moth is now annual (Brown, 2006). The first record for Hertfordshire was only in 1987 but there have been over 40 since (Plant, 2008). By 1990, this expansion was apparent further north, with Derbyshire colonised and increased numbers noted in Cheshire.

However, the first modern record (one previous, in 19th century) for well-worked South Lancashire did not arrive until 1996, just over the border from Cheshire, and it was not until 2004 that this population joined up with the North Lancashire one founded in 1993. By then, the moth had spread east into the Yorkshire vice-counties, Northumberland and Durham, often following river valleys such as the Lune and Tyne, perhaps for habitat reasons. A similar eastwards movement was later apparent in Scotland. In a way, this colonisation of

Friday 18th September:**National Moth Night at Perivale Wood**

From 7:15pm until late.

Entrance from Sunley Gardens: <http://tinyurl.com/pgggad>)

Moth trapping etc. Free to members and their guests and others but booking essential please – contact David Howdon (david.howdon@virgin.net) if you plan to attend.

Sunday 27th September:

AES survey of a Surrey garden.

Joint meeting with the Holmesdale Museum Club, Reigate.

Led by Jacqueline Ruffle.

Saturday 17th October:**Annual Exhibition & Insect Fair, Kempton Park Middlesex**

The UK's premier entomological fair.

Saturday 7th November:**Worcestershire Entomology Day**

A day of talks and displays organised by Wyre Forest Study Group. This year the event will focus on changes in the insect fauna of the county resulting mainly from climate change. Prebooking is advised – **please note there is a charge of £8 for this event!** The meeting will be held at Heightington village hall at SO764711. If you would like to attend please contact Geoff Trevis (AES Conservation Representative for Worcestershire) on 01905 774952 or by e-mail at geoff.trevis@btinternet.com.

AES Outreach Calendar 2009

The AES will have a presence at the following events in 2009.

Help from members to man the stand at these events would be much appreciated.

Please let the AES secretary know if you can help – secretary@amentsoc.org.

Saturday 14th March: Worcestershire Recorders' meeting

Sunday 7th June: River Mole Discovery Day

Leatherhead Leisure Centre, Surrey

A chance to take part in free competitions, guided walks, river dipping, games, hurdle making, butterfly spotting and many other environmental activities.

Saturday 12th September: Droitwich Spa Salt Day, Worcestershire

From 10:30 am

21st June: Wildlife Aid Open Day. Leatherhead, Surrey. 10:00 – 5:00.

4th July: Royal Entomological Society Insect day, York Museum

5th July: 'Go green at Catton'. Gatton Park, Reigate, Surrey

July 19th: Stroud Festival of Nature.

20th August: Osterley Park Insect Day

Sunday September 13th: Banstead Countryside Day. 10 am – 4 pm

AES Publications

Amateur Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

£ 11.45

Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988) £ 3.10

Members price £ 2.35

A Coleopterist's Handbook

Edited by J. Cooter & M.V.L. Barclay. The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

£ 54.00

Members price £ 39.00

Host plants of British Beetles: A List of Recorded Associations

A list of a wide range of plants, in alphabetical order, together with the beetle species that have been recorded as being associated with them. 24 pages (1992) £ 3.10

Members price £ 2.35

A Silkmother Rearer's Handbook by B.O.C. Gardiner

SPECIAL OFFER PRICE £ 7.70

No further discounted price available

A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996) £ 14.20

Members price £ 10.60

Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980) £ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003) £ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982) £ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001) £ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and describe them. 422 pages. Hardback. (Reprinted 1994). £ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996) £ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999) £ 18.90

Members price £ 14.10

Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition – 2001) £ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003) £ 7.40

Members price £ 5.45

The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival. £ 11.90

Members price £ 8.90

Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951) £ 1.05

Members price £ 0.90

A Label List of European Butterflies

20 pages. (Revised 1981) £ 2.35

Members price £ 1.85

Some British Moths Reviewed

Aid to the identification of some of the more difficult species. Reprinted from the *Amateur Entomologist* Vol. 5 (1941) and a *Guide to the Critical Species of Lepidoptera*, reprinted from *Entomologists' Gazette* 1969-72. 64 pages, 6 black and white plates, numerous figures (1985) £ 4.45

Members price £ 3.35

Butterflies of Cyprus 1998 (Records of a years sightings) by Eddie John

Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000) £ 4.30

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Collecting Het.Bugs (Hemiptera: Heteroptera)

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Members price £ 1.00

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12 pages (including 2 plates), 4 figures. (1946) £ 1.10

Members price £ 1.00

Collecting Lacewings

9 pages, 8 figures, 5 plates. (2nd edition 1976) £ 2.25

Members price £ 1.75

An Amateur's Guide to the Study of the Genitalia of Lepidoptera

16 pages, 15 figures. (1973) £ 3.10

Members price £ 2.35

Rearing the Hymenoptera Parasitica

16 pages, 1 plate, 10 figures. (1974) £ 2.55

Members price £ 2.00

Rearing Crickets in the Classroom

12 pages, 2 plates. (1986) (Reprinted 1993) £ 2.10

Members price £ 1.65

Guidelines for Entomological Site Surveys

Published on behalf of the JCCBI. 7 pages (2000) (Reprinted 2003) Members price £ 2.35

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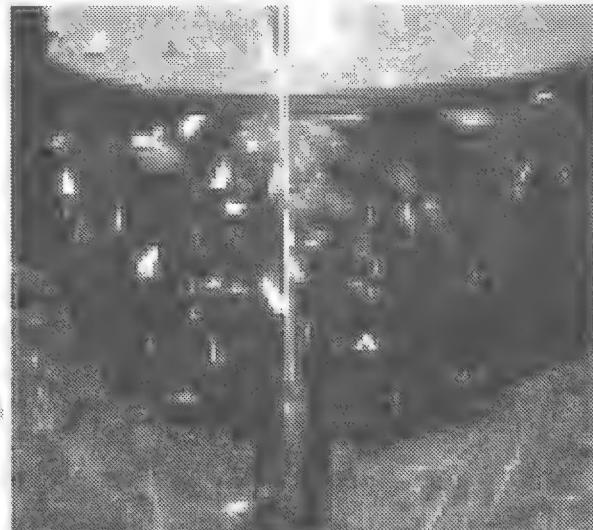
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AES Events Calendar 2009



Please see the AES website for full and up to date listings of AES and other events.
Except for the Worcestershire Entomology Day in November all events are free to members and their guests.

For further details please contact the AES Secretary via the PO Box or via email (secretary@amentsoc.org)

Tuesday 16th June:

De La Beche Room, Natural History Museum, London SW7

6:00 – 8:00 pm but meet up at 5:30 to ensure access to the Museum.

'Entomology' – Introduced by Professor Maurice Moss.

This is a Joint 'Gossip' Meeting with our affiliate the Quekett Microscopical Club.

You can bring insects with you, live or dead. Various microscopes will be provided.

Saturday 20th June:

AES Conservation Project: AES & Bug Club Field Trip to Bersted Brooks, Rowan Way, Bognor Regis, West Sussex.

Starting at 11.00 a.m.

This is a return visit to this site, which was designated as a public open space a few years ago, previously being agricultural land. The site is managed by the Friends of Bersted Brooks and Arun District Council. The aim of the visit is to expand the list of invertebrate records. Our previous visit in August 2005 resulted in the first UK record of the picture-winged fly *Tephritis divisa*.

There is a small car park at the site, but a much larger free car park on the opposite side of Rowan Way serving various retail outlets such as Halfords. The entrance to the site is a few metres down Rowan Way off the A29, on the outskirts of Bognor Regis.

Saturday 27th June:

Horsenden Hill, Perivale, Middlesex.

Meet at Horsenden Farm (TQ163840) 10.00 a.m.

A butterfly walk on Horsenden Hill to see the White-letter hairstreak, and examination of moth trap contents from the previous night. Leaders: Andy Culshaw & David Howdon.

Contact: David Howdon (davidhowdon@yahoo.co.uk), 020 8426 6621

This is a joint event with Butterfly Conservation and the London Natural History Society. **Please note that due to expected high numbers this event is restricted to AES members and our partner organisations only.**

Thursday 27th August:

AES & Bug Club visit to the World Museum Liverpool

William Brown Street, Liverpool, L3 8EN. 11:00 - 4:00

This exciting visit will involve a tour of the museum's extensive insect collections and a guided visit to the Bughouse and the Clore Natural History Centre. This AES event is also open to members of local entomological and natural history societies and their guests. Please let the AES secretary (or Guy Knight at the Museum) know if you plan to attend – secretary@amentsoc.org.

Friday/Saturday or Saturday/Sunday 21st - 23rd August:

Osterley Park BioBlitz

This will involve a weekend survey of ancient grassland and woodland at Osterley Park, including examining the contents of moth traps during the evening and the following morning. Includes talks on invertebrate conservation at Osterley Park by the National Trust.

Saturday 12th September:

Oxford University Museum of Natural History

Parks Road, Oxford OX1 3PW. 11:00 – 4:00.

Meet up at the Museum's entomology department (upstairs) at 11:00 am.

This event will involve bug hunting in the nearby University Parks, followed by lunch and examining and handling insects and other invertebrates in the Museum. Led by Darren Mann.

Please let the AES secretary know if you plan to attend – secretary@amentsoc.org.

eastern Britain by Pale Pinion is more remarkable and unexpected than its 250 km northward advance, given the strong western bias to its previous distribution. The authors are not aware of any similar instances.

Pale Pinion is generally considered a low-density species, rarely seen in more than ones and twos. Perhaps it is also relatively inactive, especially before hibernation, as spring individuals are usually in fair condition despite being seven or eight months old. In the circumstances, the 30 or so Scottish records despite the paucity of observers suggest that Pale Pinion is now well-established there.

Interestingly, our other three *Lithophane* species are currently doing well. Tawny Pinion *L. semirunnea* is slowly extending into northern England, while Grey Shoulder-knot *L. ornitopus* is recovering from a long-standing decline in the mid 20th century. Since its arrival in 1951, Blair's Shoulder-knot *L. leautieri* has famously spread throughout England and Wales to reach southern Scotland by 2001. Who would have bet on Pale Pinion to get there first?

Finally, it is a tribute to the present system that the vice-county recorders were able and willing to supply us with the requested information without delay. What is lacking, however, is a country-wide overview. It seems that nobody (including the authors) had fully realised the scale of Pale Pinion's range expansion. Though it had reached Scotland by 1996, this was not mentioned in Waring & Townsend (2003) or even in Townsend & Waring (2007). Hopefully, the National Macro-moth Recording Scheme (NMRS) will lead to better collation of records, enabling such national trends to be identified more easily. It has already drawn attention to the recent range expansions of Red-necked Footman *Atolmis rubricollis* and Shuttle-shaped Dart *Agrotis puta* (Fox *et al.*, 2008, though distribution maps are transposed), but various other species suspected to have spread dramatically in the last decade are as yet undocumented.

Acknowledgements

In addition to those observers and vice-county recorders mentioned in the text, we are grateful to the following for sending useful information: David Emley, Bryan Formstone, John Harold, Tony Jacques, Liz Still, Jeff Waddell, and the Dumfries & Galloway Environmental Resources Centre. Special thanks goes to Neil Gregory for generating the maps.

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***Coleophora frischella* (L.) (Lep.: Coleophoridae) in Hertfordshire**

A single female *Coleophora frischella* was taken at mv light by CWP at Sawbridgeworth Marsh Nature Reserve on the Hertfordshire (VC 20) and North Essex (VC 19) border on 29 May 2004. Technically, the light trap was a few metres inside Hertfordshire! It remained in a box with many other *Coleophora* specimens 'pending examination' until 2008 when the entire box was passed to BG whose web site at <http://www.dissectiongroup.co.uk> aims to present images of the entire British Lepidoptera fauna. BG dissected this particular specimen during January 2009 and immediately recognised it as *frischella*.

Confusion between species of metallic green *Coleophora* has been discussed by David Agassiz (2000. The 1997 Presidential Address – Part 2. Why do names change? *Br. J. ent. nat. Hist.* 13: 41-49). For many years the names *alcyonipennella* and *frischella* were erroneously regarded as synonymous. The genitalia figures in the standard work by Patak (1974. Beiträge zur Insektenfauna der DDR: Lepidoptera – Coleophoridae. *Beiträge zur Entomologie* 24: 153-278) were transposed and in Emmet (1996. *Moths and Butterflies of Great Britain and Ireland* 3) the species description given refers to *alcyonipennella* whilst the genitalia drawings are of *frischella*.

After sorting the confusion it was apparent that almost all British reports of the species pair were referable to *C. alcyonipennella*. Indeed, the first British record of *C. frischella* came as recently as 2002 when David Gibbs found it at the Batheaston Oxbow Nature Reserve, Somerset (VC 6), on 18 June 2002 (Gibbs, 2004. *Coleophora frischella* (Linnaeus, 1758) (Lepidoptera: Coleophoridae) confirmed as a British species. *Entomologist's Gazette* 55: 73-80). This record was also reported by Langmaid, J. R. & Young, M. (2003. Microlepidoptera review of 2002. *Entomologist's Rec. J. Var.* 115: 261) and by Barnett, et al, 2008. *Moths of the Bristol Region*). Gibbs notes two other British records of *C. frischella*, from West Kent (VC 16), Lewisham, 20 June 1850 (Stainton) and Oxfordshire (VC 23), Milham Ford, 21 May 2001 (J. Webb) and also reports two confirmed records from Ireland in Clare (H9), The Burren, 3 August 1951 (J. D. Bradley) and Galway (H16), Ballyconneely, 1 and 5 June 1968. More recent British and Channel Islands Records (including the Hertfordshire record here reported) are as follows, in chronological order:

Herefordshire (VC 36) Gurney's Quarry, 14 May 2002 M.W. Harper (John Langmaid, pers. comm.); Great Malvern, Worcestershire (VC 37) six swept from *Trifolium pratense* in an old meadow on 23 May 2004 by A. N. B. Simpson (Anon, 2005. 2004 Annual Exhibition: British Microlepidoptera. *Br. J. ent. nat. Hist.* 18: 188); West Sedgemoor, South Somerset (VC 5), O. S. grid ref. ST 3424, 25 May 2004, genitalia det. Jon Clifton — J.A. McGill (in Langmaid & Young, Microlepidoptera Review of 2007. *antea*: 13-32); Sandbanks, North Lincolnshire (VC 54), O. S. grid ref. TF 4692, 27 May 2004, genitalia det. — M.S. Parsons (in Langmaid & Young, Microlepidoptera Review of 2007. *antea*: 13-32); Sawbridgeworth Marsh Nature Reserve, Hertfordshire (VC 20), a female at mv light on 29 May 2004 (C. W. Plant; gen. det. B. Goodey); St Peters, Guernsey, Channel Islands (VC 113), O.S. Grid WV 2578, 8 August 2005, Peter Costen (genitalia det. Phil Sterling); Binley Woods, Coventry, Warwickshire (VC 38), 24 May 2007, genitalia det. — A. Prior per N. J. Stone (in Langmaid & Young, Microlepidoptera Review of 2007. *antea*: 13-32).

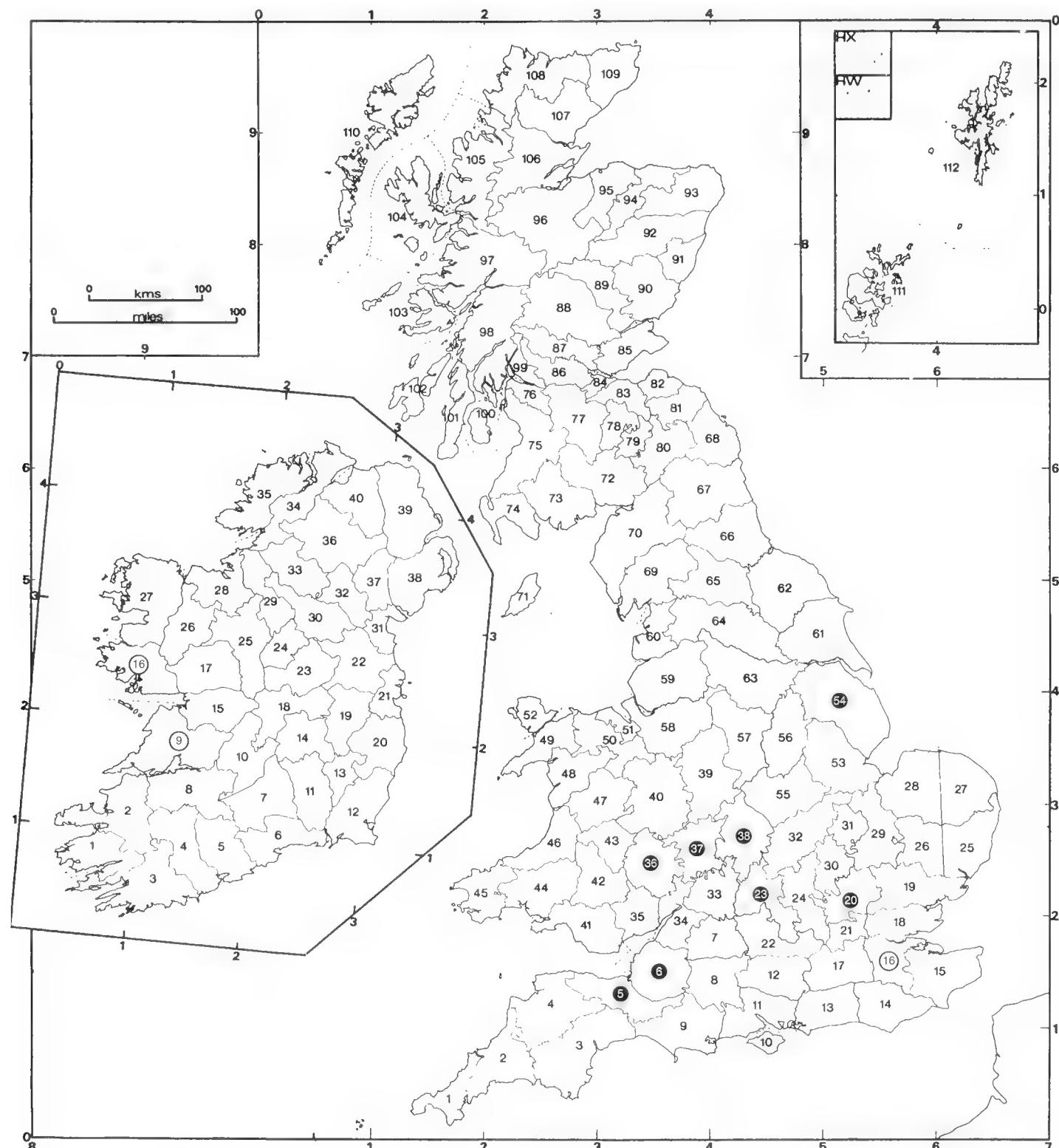


Figure 1. Known distribution, by Vice-county, of *Coleophora frischella* (L.) in The British Isles at February 2009.

There appear to be no other published British records of *Coleophora frischella* in Britain or Ireland. Either *frischella* has undergone a range expansion/population increase in the early years of the current millennium or perhaps people are looking for it more seriously; the increase in the number of reports relating to the year 2004 is of possible interest. Either way, it is clearly unwise to assume that records of the *alcyonipennella/frischella* species pair away from the south-west are necessarily *alcyonipennella*; the only means of being certain of which species is which is through examination of the genitalia, where the differences are clear in both sexes.

We are most grateful to John Langmaid for providing up to date information on records of this species submitted to him for the annual reviews of noteworthy microlepidoptera that are published in this journal.— BRIAN GOODEY, 298 Ipswich Road, Colchester, Essex CO4 4ET and COLIN W. PLANT, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (cpauk1@ntlworld.com).

***Micromus angulatus* (Stephens) (Neur.: Hemerobiidae) in Monmouthshire and notes on habitat associations**

Micromus angulatus appears to have a notably thin and patchy distribution within its British range and little has been published on its habitat associations here. Plant (1994. *Provisional atlas of the lacewings and allied insects (Neuroptera, Megaloptera, Raphidioptera and Mecoptera) of Britain and Ireland*. Huntingdon: Biological Records Centre) comments that the only constant feature of the documented sites is low herbage, but it has been found in a wide variety of situations – on unimproved chalk grassland, a limestone quarry, damp verges on arable land, suburban gardens, scrub and woodland. He adds that soils are often calcareous.

A female *M. angulatus* was found near Redwick on the Caldicot Levels in Monmouthshire (O.S. grid reference ST 3985), on 15.viii.2008. This appears to be a new county for the species. The site is poorly-drained rush-pasture on peaty fen soils, and sheltered by old bushy hawthorn-dominated hedges. The sward composition suggests some past agricultural improvement, but includes a range of plants typical of mesotrophic soils such as knapweed *Centaurea nigra*, with fine sedges *Carex* spp and lousewort *Pedicularia* in the damper areas. Interestingly, there are strong similarities with my one previous encounter with the species: Takeley Hill, Hatfield Forest, North Essex (TL 5420), 30.vii.2002. Another female was taken here from an area of unimproved mesotrophic grassland close to the scrubby edge of one of the ancient coppice woodlands. The soils are clayey with calcareous influences (Boulder Clay), and can be water-logged for much of the year.

The commonalities between the two sites are the mixture of moderately-grazed species-rich grassland with bushy areas close by, providing good shelter, the moist soils maintaining relatively humid conditions within the vegetation and an open sunny aspect. This combination of features is very consistent with the results of recent scientific studies carried out on the continent. Holuša & Vidlička (2002. Chrysopids and Hemerobiids (Plannipenia) of young spruce forests in the eastern part of the Czech Republic. *Journal of Forest Science* **48**: 432-440) describe the habitat of this lacewing as herbaceous plants and low bushes in meadows, and on edges of forests. Similarly, Stelzl and Devetak (1999. Neuroptera in agricultural ecosystems. *Agriculture, Ecosystems & Environment* **74**: 305-321) say that it is mainly found in low vegetation, such as grasses and herbs, but can also move into shrubs and deciduous trees. Habitat mosaics appear to be important to the species.— K. N. A. ALEXANDER, 59 Sweetbrier Lane, Heavitree, Exeter EX1 3AQ.

LEPIDOPTERA OF THE FALKLAND ISLANDS: (1) PYRALOIDEA

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Abstract

The Falkland Islands Pyraloidea fauna consists of three resident species in the family Crambidae. *Fernandocrambus falklandicellus* (Hampson) (sub-family Crambinae) and *Scoparia glauculalis* Hampson (Scopariinae) are widespread and common throughout the islands during the austral summer. *Crambus elongatus* Hampson, also widespread and common, is added to the list of resident species. *Udea ragonotii* (Butler) (Pyraustinae) is removed from the resident list and is probably a migrant/accidental from South America. Other accidental specimen records include *Ephestia* sp., *Nomophila* sp., *Pediasia?* sp. and *Pyralis farinalis* (Linnaeus).

Keywords: Lepidoptera, Pyraloidea, Falkland Islands, *Fernandocrambus falklandicellus*, *Crambus elongatus*, *Scoparia glauculalis*, *Udea ragonotii*.

Introduction

The Falkland Islands (a British Overseas Territory) lie between 51° S and 52° 30' S and between 57° 45' W and 61° 30' W in the South Atlantic, with one outlying island, Beauchêne, about 50 km to the south at 52° 55' S and 59° 11' W. The archipelago, consisting of two large and about 700 smaller islands (total land area 12,173 km²), is situated about 700 km north-east of Cape Horn and 500 km east of the nearest part of the South American continent (Patagonia).

The islands, which lie on the submarine Falkland Plateau, were probably situated to the south-east of South Africa when the present continents were combined in Gondwanaland. There are only two seasons in the Falkland Islands: summer (November to February) and a longer winter for the remainder of the year. Temperatures range from 19°C in January to 2°C in July, with a mean annual temperature of 6°C. Winter weather conditions are similar to those of southern England, but there are more hours of sunshine and snow is possible throughout the year. The semi-arid climate (average rainfall between 431 mm (West Falkland) and 630 mm (East Falkland) per year), gentle relief (highest point is 705 m) and widespread impermeable soils combine to produce areas of ground that remain wet throughout the year. Constant strong (average speed 16 knots) prevailing winds from South America to the west and dry summers prevent any trees from growing naturally and the natural vegetation is mostly grassland or dwarf shrub heath (Robinson 1984, Aldiss and Edwards 1999, Wagstaff 2001).

The main vegetation associations are: (1) Maritime tussock formation in coastal areas, (2) Oceanic heath formation, which covers most of the land area, (3) Feldmark formation dominated by cushion plants, (4) Bog formation comprising wet, swampy areas, and (5) Fresh water vegetation. 80-90% of the flora is also recorded from Patagonia and Tierra Fuego (Davies & McAdam, 1989).

Pyraloidea fauna

The Pyraloidea consists of two families, based on the presence or absence of the praecinctorum between the paired ventral tympanic bullae of the abdomen (Solis, 2007). Consequently, the families are now regarded as Pyralidae (praecinctorum absent) and Crambidae (praecinctorum present). All Falkland Island resident species of Pyraloidea are members of the Crambidae. Robinson (1984) records three species of crambid moth from the Falkland Islands: *Fernandocrambus falklandicellus* (Hampson, 1895: 930) (sub-family Crambinae), *Udea ragonotii* (Butler, 1883: 59) (Pyraustinae) and *Scoparia glauculalis* Hampson, 1897: 233 (Scopariinae). These species are illustrated in Jones' (2004) field guide. To these pyraloids Robinson (unpublished 2008) adds *Ephestia* sp., *Nomophila* sp., *Pediasia?* sp., *Pyralis farinalis* (Linnaeus) and *Fernandocrambus* nr. *moskiewiczi* Bleszynski.

The Falkland Island pyraloid fauna was studied by AGJ as part of the wider Falkland Islands Invertebrate Conservation Programme (FIICP) fieldwork between September 2004 and September 2007. FIICP was a Falklands Conservation (the organisation that co-ordinates wildlife conservation on the Falkland Islands) programme supported by the The Natural History Museum, London (BMNH) and the University Museum of Zoology Cambridge, and funded by the Darwin Initiative (UK Department of Environment, Food and Rural Affairs; DEFRA). AWD collected pyraloid material in 2005 and 2006. Specimens were captured by sweep netting, stalking with a net or in light traps.

The present paper records species captured during these studies and identified by male genitalia. Reference is also made to specimens held in the BMNH and records made by Robinson (1984; 2008). Captured material consists of three species *Fernandocrambus falklandicellus* (Hampson), *Scoparia glauculalis* Hampson and *Crambus elongatus* Hampson, 1919: 285 (Crambinae). *C. elongatus* is a Chilean species, which is previously unrecorded from the Falkland Islands. All three species were widespread throughout the islands during the austral summer (November to February). *Udea ragonotii* (Butler) was not present in our material. Further study needs to consider female genitalia and the ecology of these species. The records of *Ephestia* sp., *Nomophila* sp., *Pediasia?* sp., *Pyralis farinalis* (Linnaeus) and *Fernandocrambus* nr. *moskiewiczi* Bleszynski require further investigation.

Identification

Crambus falklandicellus (Hampson, 1895), Proc. Zool. Soc. Lond, 1895: 930
(Crambinae)

PLATE 17

Original description: 'Pale golden brown; palpi white below. Fore wing with a white streak along basal half of costa, and a somewhat broad fascia from base through cell to outer margin below apex. Hindwing somewhat paler. Hab. Falkland Islands. Exp. 28 mm'.

The male genitalia are illustrated in Fig 1 [AWDF116] and are similar to syntype genitalia (BMNH Pyralidae slide no. 5535). This species appears to be common during December, January and February in grassland throughout the islands. Oram (1992) records this species in grass heathland at Hill Cove, West Falkland. A number of similar taxa have been named from southern South America (e.g. *Crambus radicellus* Hampson, 1895; Type Locality: Patagonia) and some of these may prove to be conspecific.

Crambus elongatus Hampson, 1919, Ann. & Mag. N. Hist. Ser. 9, 3: 285
(Crambinae)

PLATE 18

Original description: '♂. Head, thorax and abdomen white with a reddish ochreous tinge; antennae fuscous; palpi with some blackish at sides, white above and below; pectus and legs suffused with fuscous. Fore wing white tinged with reddish ochreous leaving the costal area pure white except towards base; irrorated with a few black scales especially in submedian interspace and beyond the cell; a terminal series of black points to vein 3; cilia pure white. Hind wing white with a slight reddish ochreous tinge, the cilia pure white. Underside of forewing suffused with fuscous brown, the terminal area white; hind wing white, the costal area tinged with brown. Hab. CHILI, Chillan, 8000' (Elwes), 2 ♂ type. Exp. 40 mm'.

There is only one *C. elongatus* syntype specimen currently present in the BMNH collection (drawer 191-127). The syntype is larger than our Falklands specimens, but the genitalia (BMNH Pyralidae slide no. 5541) are similar to those of the Falkland specimens. There is evidence that hind wings have been glued back onto this syntype, but no evidence that the abdomen has been glued on; the genitalia slide is probably reliable, unlike that of *S. glauculalis* (see below). The vesica has many large and smaller cornuti. The male genitalia are illustrated in Fig 2 [AWDF122]. This species has not previously been recorded from the Falkland Islands, even though it appears to be common during December, January and February in grassland throughout the islands.

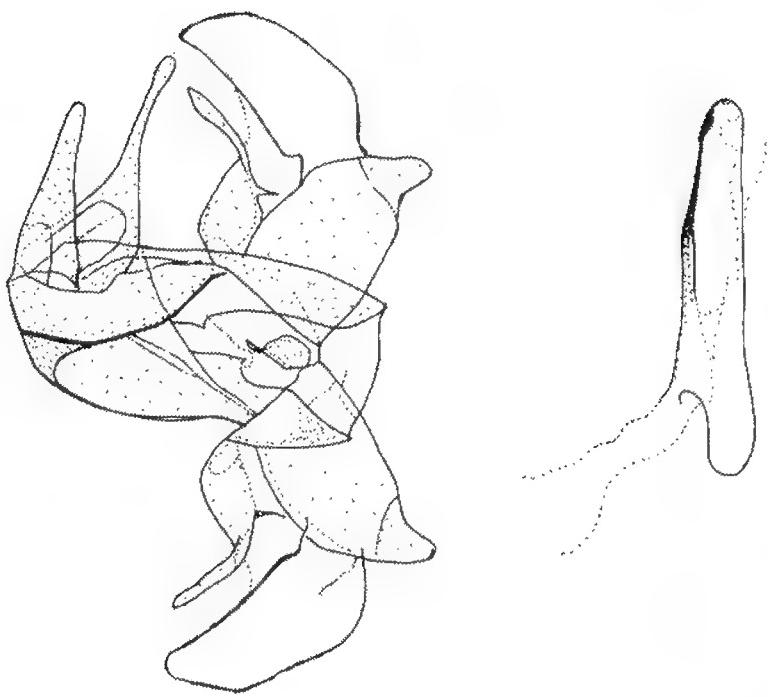


Figure 1. *Crambus falklandicellus* (Hampson, 1895), ♂ genitalia with aedeagus removed (prep. AWD F116); Falkland Islands: Mount Pleasant Airfield, 2-7.i.2006, leg. A., S., H.J. & H.W. Wakeham-Dawson, coll. AWD.

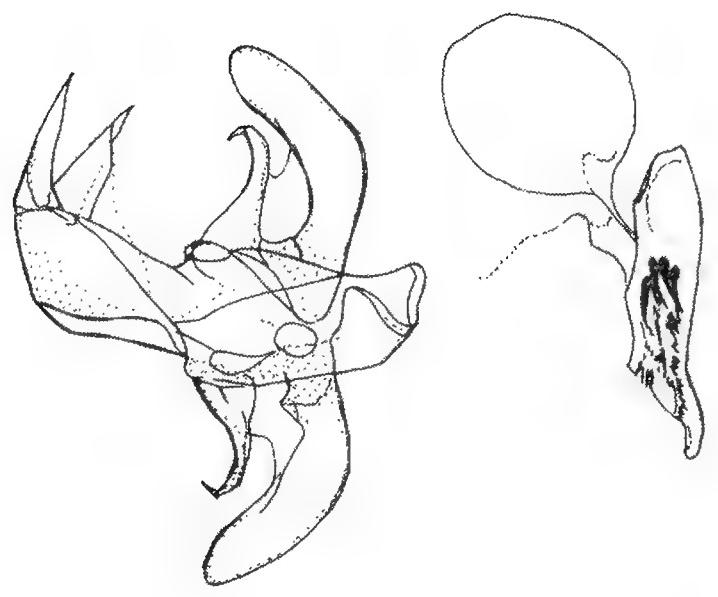


Figure 2. *Crambus elongatus* Hampson, 1919, ♂ genitalia with aedeagus removed (prep. AWD F122); Falkland Islands: Ajax Bay, 7.i.2006, leg. A., S., H.J. & H.W. Wakeham-Dawson, coll. AWD.

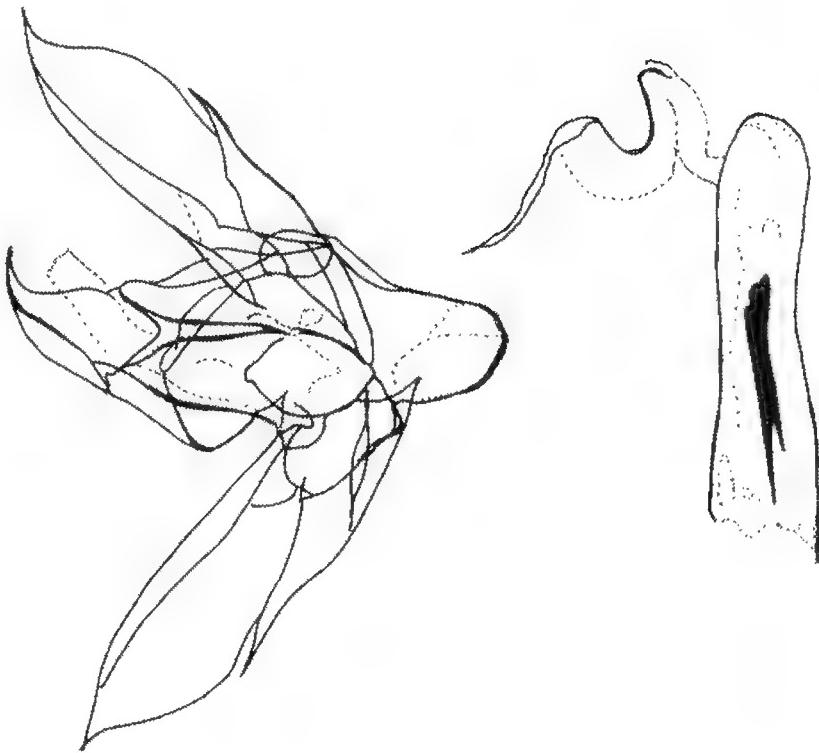


Figure 3. *Scoparia glauculalis* Hampson, 1897, ♂ genitalia with aedeagus removed (prep. AWD F125; BMNH Pyralidae Slide no. 22391); Falkland Islands: East Island, x.[19]08-ii.[19]09, leg. A. McReid, BMNH 1909-289.

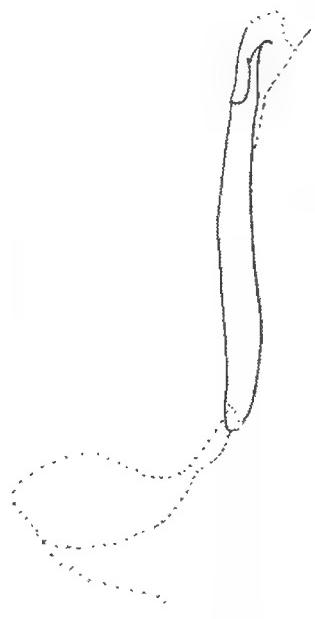


Figure 4. *Udea ragonotii* (Butler, 1883), ♂ genitalia with aedeagus removed (prep. AWD F126; BMNH Pyralidae Slide no. 22392); Falkland Islands: East Island, x.[19]08-ii.[19]09, leg. A. McReid, BMNH 1909-289..



Plate 17. *Crambus falklandicellus* (Hampson, 1895), ♂, Falkland Islands: Mount Pleasant Airfield, 31.xii.2005, leg. A., S., H.J. & H.W. Wakeham-Dawson, coll. AWD (F118).



Plate 19. *Scoparia glauculalis* Hampson, 1897, ♂, Falkland Islands: East Island, x.[19]08-ii.[19]09, leg. A. McReid, BMNH 1909-289 (AWD F125; BMNH Pyralidae Slide no. 22391; BMNH Drawer 215-7; Mi 6546).

Plate 18. *Crambus elongatus* Hampson, 1919, ♂, Falkland Islands: Mount Pleasant Airfield, 2-7.i.2006, leg. A., S., H.J. & H.W. Wakeham-Dawson, coll. AWD (F121).



Plate 20. *Udea ragonotii* (Butler, 1883), ♂, Falkland Islands: East Island, x.[19]08-ii.[19]09, leg. A. McReid, BMNH 1909-289 (AWD F126; BMNH Pyralidae Slide no. 22392; BMNH Drawer 217-125; Mi 7904).

***Scoparia glauculalis* Hampson, 1897, *Trans. Ent. Soc. Lond.*, 1897: 233**
(Scopariinae)

PLATE 19

Original description: ‘♂. Olive-grey. Forewing of glossy silky texture; traces of yellowish marks at middle and end of cell; outer area slightly darker. *Hab.* Falkland Islands. *Exp.*, 20 mm’.

The specimens in the BMNH *S. glauculalis* (drawer 215-7) series are similar to our material, but the genitalia (BMNH Pyralidae slide no. 3756) associated with a syntype have no resemblance to the male genitalia of *S. glauculalis* captured in the present study. However, examination of this syntype showed that a mis-associated abdomen (probably from a specimen of *U. ragonotii*) had been glued onto the moth. A new slide (BMNH slide no. 22391 [AWDF125]) of male genitalia has been made from a moth in the BMNH series and is illustrated in Fig. 3. This species appears to be common during January and February in grassland throughout the islands.

***Udea ragonotii* (Butler, 1883), *Trans. Ent. Soc. Lond.*, 1883: 59 (Pyraustinae)**

PLATE 20

Original description: ‘Primaries above sericeous cream-colour, irrorated with brown and black scales; veins pale sandy brownish; two arched indistinct brown streaks towards apex, the first oblique, the second parallel to the outer margin; a black spot just before the middle of the cell, and a second, rather larger, at the inferior angle of the cell; a marginal series of minute black dots; fringe sordid at apex; secondaries silvery pale grey, with two slightly darker spots placed obliquely at the end of the cell; a marginal series of minute black dots; fringe white; thorax whity-brown; palpi long, acuminate, porrected, grey at the sides and white below; wings below grayish (the primaries especially), with black marginal dots and white fringe; body below white; the venter with lateral black dots; tarsi tipped with blackish. Expanse of wings, 24 mm. Valparaiso [Chile]’.

Although recorded as a resident species by Robinson (1984) and Jones (2004), *U. ragonotii* (Butler) was not present in our material; the single male Falkland Islands specimen in the BMNH series may be a migrant or accidental arrival from Chile or Juan Fernandez Island (the origin of the other BMNH *U. ragonotii* specimens). This specimen has been dissected (BMNH slide no. 22392 [AWDF126]) and is illustrated in Fig 4. These genitalia are similar to the syntype genitalia slide (BMNH Pyralidae slide no. 3755) and there is no evidence of a mis-associated abdomen.

Acknowledgements

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Hazards of butterfly collecting – *Abantis eltringhami*, skipper extraordinary – Cameroun 2003

Skippers (Hesperiidae) have suffered much neglect when it comes to butterfly collecting, study, and documentation. On my home turf in Africa they are not included in the major catalogue published by Bernard D'Abrera, who did not consider them to be proper butterflies. They are also omitted from the huge book on the *Butterflies of Zaire* by Lucien Berger, though that was because Berger was working on a book on all African skippers and did not want to jump the gun. He did describe a number of new species in separate papers. Some new skippers have since been added to the African list mainly by Lee Miller and by Larsen & Collins in various papers, but the last full revision of the African skippers was in 1937.

It is now generally agreed that all skippers belong in the superfamily Hesperioidea that is distinct from all other butterflies in the superfamily Papilionoidea (this mirrors the older terms Rhopalocera and Grypocera). However, the two superfamilies are monophyletic, i.e. they share a common ancestor that differs from all the moths. Skippers are also largely day-flying insects that share the habitat and interact with other butterflies. Most modern books deal with them as well as with other butterflies, and I have done so since my first book (*Butterflies of Lebanon*) was published 35 years ago. My New Year's Resolution this year was to start writing a definitive book with the working title *Skipper butterflies of the Afrotropical Region* to make up for lost ground. The last detailed treatment of all the African skippers dates back to the *Catalogue of the African Hesperiidae the British Museum*, a splendid effort from 1937 that is

now severely outdated, though still essential to anyone studying African butterflies. I still tremble a bit at the audacity of my decision! Some 550 skipper species are currently recognized in Africa, with 3,700 worldwide. More will be revealed as the revision proceeds.

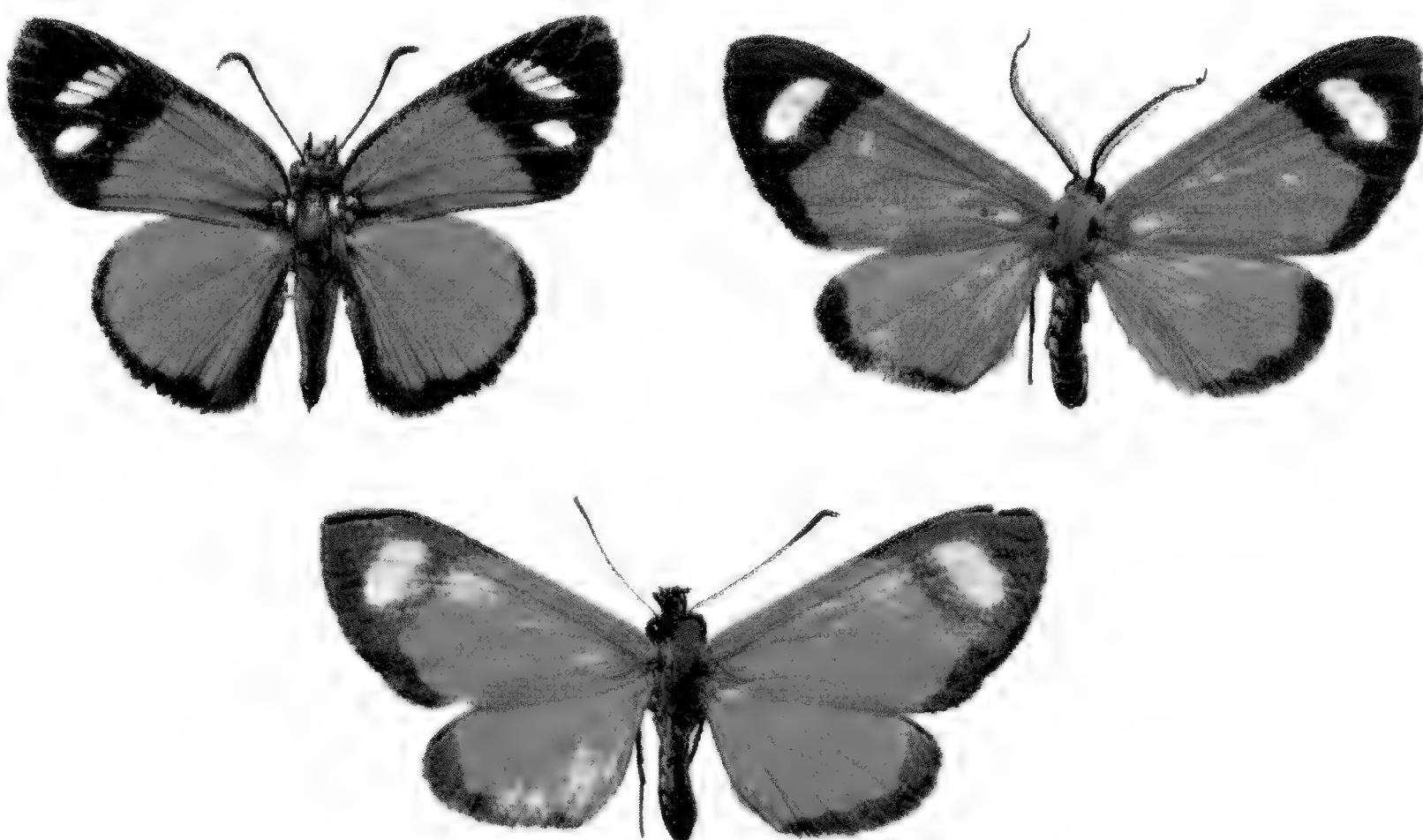


Plate 21. Top left: *Abantis eltringhami*. Top right: Moth (*Neuroxena* sp. (Arctiidae)). Below: The moth/skipper forgery.

Most skippers are actually rather small and somewhat dull in colour: many have distinctly retiring habits and skippers have suffered from the perception that they lack charisma. However, the paradise skippers of the genus *Abantis* are rather large (wingspan is 3.5 cm or so), with a huge range of colour patterns that differ from all other skippers, and they are often very pretty. There are now 22 known species, two described by Collins & Larsen. Steve Collins is the creator and the director of the African Butterfly Research Institute (ABRI) in Nairobi, which is one of the finest African butterfly collections anywhere in the world. In terms of quantity there are larger collections, but in terms of the proportion of the 4,000 African butterfly species represented, and its perfect and up-to-date curating, it is now probably the best.

The ABRI collection probably contains more *Abantis* than all public collections in the world combined (except for one or two reasonably common species in southern Africa of which there are many). Most *Abantis* are rare to very rare and difficult to come across. I have only found a third of the species myself during my many years in Africa. None is as rare as Eltringham's paradise skipper (*Abantis*

eltringhami Jordan, 1932), of which the single male type resided in the Natural History Museum, London (Plate 21, top left). The pattern is amazing. It is orange with the apical third of the forewing jet black on which there are large white spots. This is a common pattern in various species of moths, varying in size from small to quite large, that are all considered to be toxic and their pattern to be "warning colours". But no other skipper, not even another paradise skipper, begins to resemble what is by far the most distinctive skipper in Africa.

Steve decided he wanted one. Out went a special request to collectors in Cameroun and the Central African Republic with a photograph of *A. eltringhami* and with the promise of glory for amateurs or mammon for professional collectors. Some months later came a parcel from Cameroun with the annotation that the 'butterfly he wanted' was inside. That was the lower specimen in the photo, with the characteristic broad head and antennae of a skipper, though the antennae are too slender to be an *Abantis*. Nice try ... but clearly the collector had glued a skipper head on the species of moth shown upper right, a rather obvious fake. His services have not since been required! Jurate de Prins at MRAC, Tervuren kindly informs me that the moth is a species of *Neuroxena* (Arctiidae) of which there are four species in Cameroun (top right on the photo with typical moth antennae). It is actually well mimicked by a rare little Lycaenid called *Liptenara batesi* Bethune-Baker, 1915.

Six months later another collector had better luck. A true male *Abantis eltringhami* arrived and further collecting in Cameroun has now yielded a good series, including females. Gaël vande Weghe (pers. comm.) also found a single male during his intensive research in neighbouring Gabon. It was sitting on a leaf a metre above the ground with the wings less than half open instead of completely flat, as is usually the case with the Pyrginae (I have seen this with other *Abantis*, but only rarely). It was only when he actually saw the antennae that he realized what it was! So Africa's most distinctive and immediately recognizable skipper is now not quite as rare as it used to be, but it is still asking us questions. Why is it apparently a near-perfect mimic of the toxic moth? Most species of *Abantis* fly like greased lightning, giving potential predators little chance of comparing it with the slow-flying moth. Most butterfly mimics adopt the slow, almost provocative, flight of the toxic models. Take the genus *Pseudacraea*: those species that mimic large *Acraea* have a slow, measured flight just like that of the model. In nature I am sometimes hard put to tell them apart until I take them out of the net. Other *Pseudacraea*, for example *P. semire* Cramer, 1779 with its beautiful apple-green patterning, flies as fast as any normal Nymphalid, and the mimics can also put on a fast turn of flight when they are scared. The same is true of the kite swallowtail *Graphium ridleyanus* White, 1843, which is a fine mimic of a large *Acraea*, though most other *Graphium* fly so fast that they are hard to catch in flight. A small group of *Euphaedra* butterflies, normally fast forest-floor species, have adopted the slow flight of their model, well above the forest-floor level. It is just – only just – possible that *A. eltringhami* has evolved a slow flight

in support of mimicry. I can hardly imagine this, but I may be blinkered. Only field observations will tell.

It is, of course, also possible that the patterns of the skipper and moth are an accidental evolution of a convergent colour pattern: Possible? Probable? Something else? I don't know. Let the reader decide. The fact remains that Africa's rarest and most distinctive skipper, so different from the other 20 members of its genus, is the spitting image of a known toxic moth. — TORBEN B. LARSEN, 358 Coldharbour Lane, London SW9 8PL (E-mail: torbenlarsen@btinternet.com).

OBITUARY

Michael Eugene Nicolas Majerus

13 February 1954 – 27 January 2009



Michael Majerus had an insatiable curiosity for insects which, harnessed to his magnificent energy and enthusiasm, enabled him to become an evolutionary geneticist and ecologist of world-wide renown. Mike was born in Middlesex in 1954 and began collecting butterflies at the age of four and was hooked for life: later on, he sometimes spoke of the "four wasted years". He was educated at Merchant Taylor's School and Royal Holloway College, where he completed a PhD on moth coloration. After two years at the University of Keele, in 1980 he took up a position in the Department

of Genetics at the University of Cambridge, and was promoted in 2006 as Professor of Evolution in that same Department.

Mike will be remembered in particular for his work on Lepidoptera and Coccinellidae, and his major contribution is to have clarified our understanding of some important concepts in biology. He was one of the first to provide evidence that female mating preference could be genetically determined. This work, based on ladybirds, gives support for a critical element in the Darwinian theory of sexual selection. He worked extensively on the biased sex-ratios caused by male-killing bacteria in some ladybird and butterfly species, providing some of the best evidence available of the causes and consequences of sex ratio distortion in natural populations. More recently, Mike led a team working on the invasion of the UK by the Harlequin Ladybird *Harmonia axyridis*, which is destined to

become a model system in which to study the general principles underlying the ecology of invasive species.

The work for which Mike is probably best known is his study of the peppered moth *Biston betularia*. This work illustrates perfectly Mike's qualities as a research biologist. It was based on detailed experimental field work, nurtured by over 40 years of general moth trapping. Not for him the quick appropriation of a model species from other experts: he was able to do critical experiments on moths in the context of a deep understanding of their general field biology. It also shows his deftness in choosing an important topic: he could see how vital it was to restore this moth to its proper place in the pantheon of evolutionary biology. And finally, it shows his courage in taking the fight to the enemy, and his ability to engage with the general public on a topic of profound interest to us all.

Mike was a natural as a teacher. His excitement about his subject was infectious: whether it was children, students, colleagues or ancient entomologists marinaded in ethyl acetate, you could see their eyes light up as he explained his latest discoveries and enthusiasms. He took pains over his students: careful to nurture and to encourage them as they made their first steps as researchers. He was also good at spotting aptitude in admissions candidates, often seeing interests and abilities that the rest of us had missed.

One incident on a field course I was running some years ago in Norfolk sums up Mike's life-enhancing qualities. For several years, I had been showing the final-year zoologists how to catch moths at light, but one year I decided it would be good to ask a professional, that is Mike, to help out. He appeared in his van which was bristling with equipment, including several Robinson traps mounted on huge black dustbins. His arrival coincided with a torrential thunderstorm. I was quite keen to retire for a pint, and thought the students might agree with me. But Mike was undeterred. We marched into the pinewood carrying generators, traps and nets. One student fell up to her chest in a saltmarsh drain. Thoughts of health and safety, death from exposure, raced through my mind, but with a small amount of encouragement from Mike she readily agreed to keep going. The rain worsened but we set the traps up, with Mike coaxing his sodden Benson & Hedges into life. We had the best moth trapping night ever, the students had fun, and Mike wrote a scientific paper about it.

Mike was the sort of man who made things happen. He wrote five meaty books, dozens of highly cited research papers, as well as dozens of probably not quite so highly cited but nevertheless important papers in journals such as this one. He changed people's lives: making them take notice of the natural world, inspiring them to become the evolutionary biologists of tomorrow. And he just loved insects: they were his life, his passion. Entomology has lost a skilful, tireless and doughty champion.

William A. Foster

Finding *Jodia croceago* (D.& S) (Lep.: Noctuidae) – the Orange Upperwing

There appears to be a general supposition that the Orange Upperwing *Jodia croceago* is ‘on its last legs’ in Britain; looking for it is, therefore, something of a priority, so that any sites where it may still be present can be managed appropriately. Accordingly, it may be useful to share my extremely limited experience of catching this species overseas.

I have never specifically targeted the Orange Upperwing, but have caught it ‘accidentally’ at two sites where I supposed it might well be present. In both places the traps were sited **above** the oak trees on which the larvae feed rather than in the woodland itself. At St Beauzile, in the Tarn Department of south-west France, I have caught it at light (125 watt mbf, white bulb) on three occasions in traps at the edge of a meadow positioned just below the crest of a ridge formed by a line of low hills *at the edge of* the oak-dominated woodland that covers one of the adjacent downwards slopes. Trapping over several years in the woodland and nearby the base of the slope has not produced a single *croceago*. More convincingly, I caught this species in October 2008 at Kozhuh in south-west Bulgaria at an identical light source suspended in front of a vertically mounted sheet on a hillside considerably *above* the presumed source woodland in the valley below (**Plate 22**).



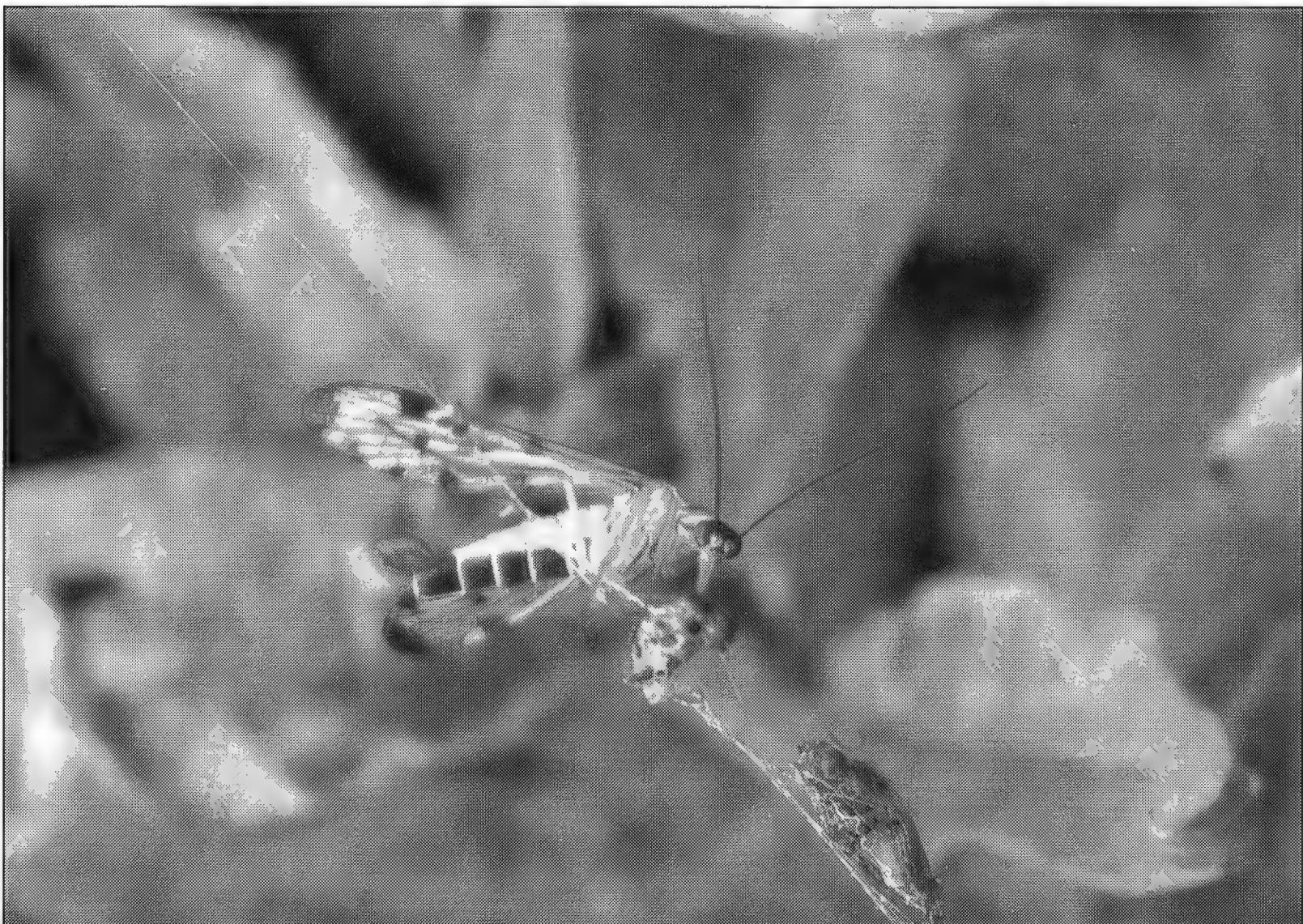
Plate 22. The vertically mounted sheet on the left of the picture is at some considerable vertical distance above the woodland just creeping in to the right of the photograph and which is the presumed source of the *Jodia croceago* adults.

To catch Orange Upperwing it might, therefore, be wise to try light trapping *above* oak woodland, or else some distance away from the woodland edge. Since the species is a UK Biodiversity Action Plan Species, funding ought to be available for experimental work such as operating moth traps from, for example, 'cherry-picker' mobile platforms used for servicing street lights; it is hoped that this brief report might provide sufficient circumstantial evidence to support any budget application. It is entirely possible that the moth flies in or above the canopy and does not normally come to ground level.— COLIN W. PLANT, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (E-mail: cpanuk1@ntlworld.com).

***Panorpa germanica* L. (Mec: Panorpidae) on a spider's web**

Scorpionflies of the genus *Panorpa* are usually described as carnivores, but it is said that their diet consists largely of dead and injured insects, so they may rather be thought of as scavengers. As they have also been reported to feed on nectar and rotting fruit, they may even qualify as omnivores. The most intriguing claim about their choice of food is that they are able to steal captured prey from spiders' webs. However, it is difficult to find either first-hand accounts or illustrations of scorpionfly feeding behaviour.

My interest was, therefore, immediately aroused when I noticed a scorpionfly walking on a thread of spider silk among herbs at the edge of a path on Chase End Hill, during a Gloucestershire Invertebrate Group field meeting on 13 September 2008. The location is at the southern end of the Malvern Hills, on the



boundary between Gloucestershire and Worcestershire. The scorpionfly, a male *Panorpa germanica*, was traversing the thread and seemed to be investigating the trapped flies along its length, probing them with its mouthparts, but it was not clear whether it was actually feeding on the corpses. There was no sign of a resident spider. I called over two fellow entomologists to share the moment and then captured the scorpionfly for identification later.

Unfortunately, it was only after taking the male that I realised there was also a female scorpionfly nearby. As she was resting on a leaf close to one end of the silken thread, she may have been a mate, or potential mate, of the male I had just caught. While arresting a possible thief, I may have also interrupted a courtship.
— MARTIN MATTHEWS, 56 Stanford Road, Ashchurch, Tewkesbury, GL20 8QU
(Email: martmatt@btinternet.com)

The Square-spotted Clay *Xestia rhomboidea* (Esp.) (Lep.: Noctuidae) in Huntingdonshire (VC 31)

Xestia rhomboidea is listed as Nationally Scarce B and is locally distributed throughout its range. The majority of recent records come from the eastern half of England, with scattered records occurring from the west, Wales and southern Scotland (Waring, P., Townsend, M. & Lewington, R. 2003. *Field Guide to the Moths of Great Britain & Ireland*. British Wildlife Publishing). The larvae feed on birches (*Betula* sp.), elms (*Ulmus* sp.) and a wide variety of low-growing plants. Such food plants would suggest that this species' distribution should therefore be wider, but it is limited by its preference for inhabiting the edges of clearings in long-established broadleaved woodland on chalk, gravel or clay (Waring, *et al.* op. cit.). However, it has also been recorded in younger vegetation and this may account for its increased occurrence in Huntingdonshire.

The Rothamsted Insect Survey had a light-trap operating at Monks Wood for over 30 years, producing a very large and extremely valuable long-term data set. On 21/22 August 2007 the trap, known as Ewingswode (site 277: O. S. grid reference TL 200797), recorded a singleton of *X. rhomboidea* – the first for 30 years – prompting this investigation into the species' distribution in VC 31.

First recorded from Whittlesea Mere (TL 29 south-west) in 1828 (recorder unknown), there are no more records until 1926 when Major S. Maples reported an adult from an unknown site and J. C. F. Fryer noted another adult in the Somersham district (tetrad TL 37U). There is then another gap in the records until three were collected in Rothamsted light traps in 1977 – two from the Waresley Village trap (site 360: TL 254545) and one from the Ewingswode trap. Another 19 years then elapsed before an adult was recorded by Barry Dickerson at Gransden Wood (TL 263552) in 1996. Since Barry reported adults from Gamlingay Wood (TL 242538) and Hail Lane (TL 216575) in 2001,

X. rhomboidea has been recorded on an annual basis. He has also recently discovered the species at several new sites, including Midloe Grange Farm (TL 164646) in 2006 and Crane Hill (TL 198552) in 2007.

No doubt greater effort has gone into searching for the species in recent years and this may partially explain the increase in the number of records, but clearly the species is also expanding its range in Huntingdonshire and its numbers are increasing.

Many thanks to Nick Greatorex-Davies for operating the Ewingswode light trap.— PHILIP J. L. GOULD, Co-ordinator, Rothamsted Insect Survey Light-trap Network, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ. (phil.gould@bbsrc.ac.uk) & BARRY DICKERSON, 27 Andrew Road, Eynesbury, St. Neots, Cambridgeshire PE19 2QE. (barry@eynesbury27.freeserve.co.uk).

Spinturnicidae (Acari): new records of parasitic bat mites from five Scottish vice counties

Mites of the family *Spinturnicidae* (Acarina: mesostigmata) are obligate blood-feeding parasites, found only on the wing and tail membranes of bats (*Chordata: chiroptera*). In the British Isles eight species from three genera have been recorded.

The taxonomy of this family is the subject of some uncertainty. A review of the family was published by Rudnick (1960. A Revision of the Mites of the Family Spinturnicidae, Univ. of California Pubs. in *Entom.*, 17: 157-284.) and is still widely used. A checklist of mites from British bats published by Baker and Craven (2003. *Sys. & App. Acarology Special Pubs.* 14: 1-20) provides a useful summary of known records and specimens. Uchikawa *et al.* (1994. *Folia Parasitologica* 41: 287-304) noted that there are still unresolved taxonomic questions in relation to this family.

The *Spinturnicidae* are highly adapted to a unique and hostile habitat, formed by the wing and tail membranes of their bat hosts. In flight these membranes can beat as many as twenty times per second in some species, as noted by Tupinnier (1997. *European Bats: Their World of Sound*, Societe Linnéenne de Lyon), potentially subjecting the mites to extreme G-forces. To this is added the risk of being groomed off by their hosts. Ferenc and Myslajek (2003. *Acta Zoologica Cracoviensis* 46: 277-81) noted the adaptations which allow the mites to survive these threats. They have flattened bodies, thickly armoured with chitin. Their legs are stout and equipped with strong claws. The egg and larval stages, which might otherwise be at risk, are completed within the abdomen of the mother, who then gives birth to a live protonymph, effectively a slightly smaller version of the adult.

When capturing specimens two defensive strategies used by mites to counter perceived threats were noted. Some flattened themselves against the wing

membrane and could not be dislodged, except by dousing in 70% isopropyl alcohol and waiting perhaps 30 seconds for their grip to relax. Others would move at speed across the wing, with the apparent aim of crossing to the opposite face of the wing.

In Scotland there are only two known records of *Spinturnicidae*, both from vagrant Noctule bats *Nyctalus noctula* found on South Ronaldsay, one of the Orkney Islands. One, *Eyndhovenia euryalis*, was donated to the Natural History Museum in the 1970s, but cannot now be traced. As this species is highly host-specific to Horseshoe Bats *Rhinolophus* spp. this was considered a dubious record by Baker & Craven (*op. cit.*). Further specimens from another vagrant Noctule were identified as *Spinturnix acuminatus*, forming the only convincing Scottish record for this family (Racey, 1977, *J. Zool.* 183: 555-556).

Records of bat parasites are sparse, due to the difficulties of obtaining specimens: all bats and their roosts are legally protected from disturbance and it is difficult to obtain a licence to catch bats and check them for ectoparasite specimens. The author has had access to bats from numerous roost sites, throughout South East Scotland, under a Scottish Natural Heritage license specifically authorising their temporary capture for the purpose of taking ectoparasite specimens.

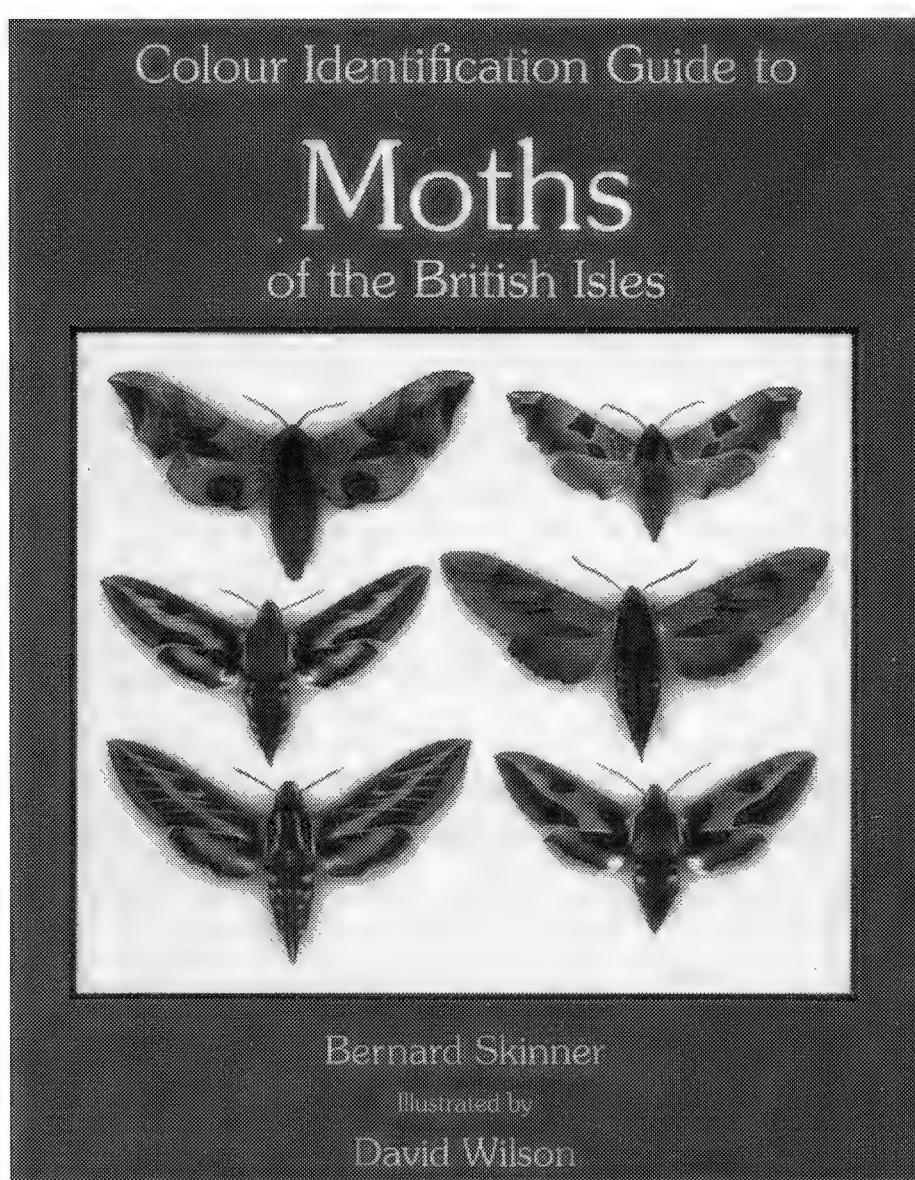
All specimens were collected by the author between 2005 and 2008. They were identified using Rudnick (*op. cit.*) and Baker and Craven (*op. cit.*). Those marked * are believed to be first Scottish records. Those marked + are believed to be vice county first records.

Species	Host	Date	VC	Location	NGR
<i>S. myoti</i> Kolenati + *	<i>Myotis daubentonii</i> Kuhl	7 Sept. 2005	84	Linlithgow, West Lothian	NS 9675
<i>S. myoti</i> Kolenati +	<i>Myotis daubentonii</i> Kuhl	10 Sept. 2005	79	Clovenfords, Borders	NT 3936
<i>S. myoti</i> Kolenati +	<i>Myotis nattereri</i> Kuhl	21 Sept. 2005	78	Broughton, Borders	NT 1135
<i>S. myoti</i> Kolenati	<i>Myotis daubentonii</i> Kuhl	30 Sept. 2005	78	Cardrona, Borders	NT 3037
<i>S. myoti</i> Kolenati +	<i>Myotis daubentonii</i> Kuhl	15 May 2006	83	Ratho, Edinburgh	NT 1070
<i>S. myoti</i> Kolenati	<i>Myotis nattereri</i> Kuhl	1 Sept. 2006	79	Clovenfords, Borders	NT 3936
<i>S. plecotinus</i> Koch + *	<i>Plecotus auritus</i> Linn.	1 Sept. 2006	79	Clovenfords, Borders	NT 3936
<i>S. myoti</i> Kolenati	<i>Myotis nattereri</i> Kuhl	22 Sept. 2006	78	Blyth Bridge, Borders	NT 1135
<i>S. myoti</i> Kolenati	<i>Myotis daubentonii</i> Kuhl	22 Sept. 2006	78	Blyth Bridge, Borders	NT 1135
<i>S. myoti</i> Kolenati +	<i>Myotis daubentonii</i> Kuhl	22 May 2008	80	St. Boswells, Borders	NT 5832
<i>S. myoti</i> Kolenati	<i>Myotis daubentonii</i> Kuhl	8 Aug. 2008	80	Roxburgh, Borders	NT 7029
<i>S. myoti</i> Kolenati	<i>Myotis nattereri</i> Kuhl	12 Aug. 2008	83	Crichton, Midlothian	NT 3861
<i>S. acuminatus</i> Koch +	<i>Nyctalus noctula</i> Schreber	27 Oct. 2008	83	Gorebridge, Midlothian	NT 3863

Help and advice has been gratefully received from Craig Macadam of Buglife, Dr Anne Baker of the Natural History Museum, Dr Stuart Smith of Lothians Bat Group and numerous other volunteer and professional bat-workers.— DAVID A. DODDS, 60 Stevenson Road, Penicuik, Midlothian, EH26 0RH (Email: david@plecotus.co.uk).

BOOK REVIEWS

Colour Identification Guide to Moths of the British Isles by Bernard Skinner (illustrated by David Wilson). 325 pp., including 51 full page colour photographic plates. 245 x 193 mm, hardbound, ISBN 978-88757-90-3. Apollo Books, 2009. £48 (€69) from the publishers at Apollo Books, Kirkeby Sand 19, DK-5771 Stenstrup, Denmark (www.apollobooks.com).



I don't know how long it took edition 2 to sell out, but sell out it did and in at least the last part of the ten years since it was published many moth people have been Skinner-less! Indeed, a whole new generation of moth-hunters has appeared on the scene blissfully unaware that 'Skinner' was anything other than a retired electrician from Surrey! Now, their education can begin, with this most excellent tome which depicts, in colour, all the species, including races and well-known forms, which, during the last hundred years, were either resident in the British Isles or reported here as a suspected immigrant more than once.

The colour plates in 'Skinner 3' are vastly improved, which says much for the technical skills of

Peder Skou at Apollo Books and rather little for the former publishers, Viking, since the self-same, superb, photographic transparencies shot by David Wilson have been used in the first, second and now this third edition. The background colour has been given a bluish tint in the review copy and this has highlighted the shadowing behind each moth making each one stand out far better than in either of the earlier editions. At the same time, comparing all three versions, the moths themselves are darker in the third edition and much more faithfully representative of the living beasts, so that the occasional criticism that I have heard, that the moths all appear rather brown, can certainly not now apply. The extra plates that were added in the second edition are also repeated here and in addition there are two new plates depicting species added to the British list in recent years. In addition, six further plates depict the right wings, only, of several species that can be confused with one another; these are presented at twice life size so that essential features are clearly visible.

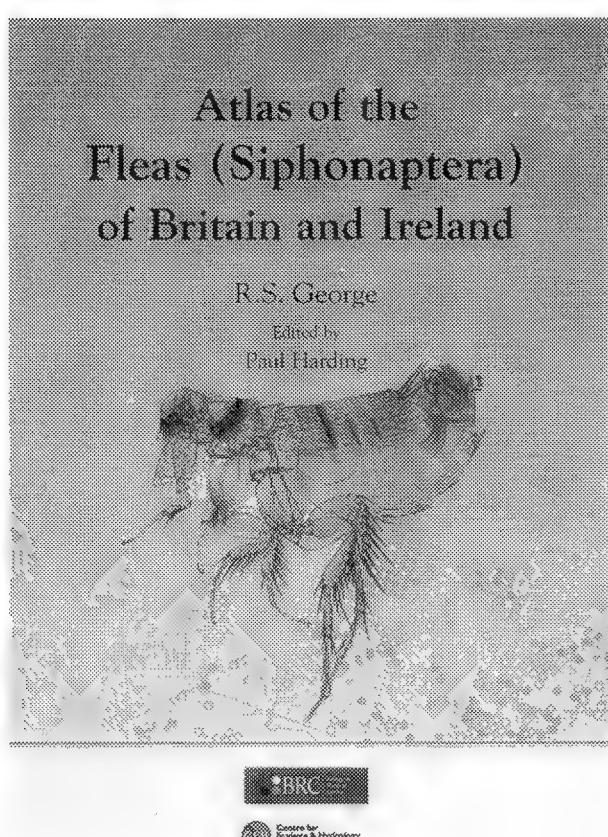
The text is only slightly altered, though the change of typeface gives the appearance that it is quite different. Texts on the additional species have been inserted as have a few additional comments here and there for existing species, but by and large the text seems unaltered. Some opportunities may have been missed – for example, the spread of the

Pale Pinion *Lithophane hepatica* through north-west England and its presence now in Scotland is not mentioned, nor is the problem of separating *Diachrysya stenochrysis* from *D. chrysitis*. However, there is little else that can be faulted in this important work. An unfortunate ‘clerical error’ has resulted in the captions for Sombre Brocade *Dryobotodes tenebrosa* and Bedrule Brocade *Mniotype solieri* being transposed (figs. 32 and 33 on Plate 44) and similarly in Plate A the half wings of Rivulet *Perizoma affinitata* and Small Rivulet *P. alchemillata* give me cause for concern – County Moth Recorders should note these two errors since they may well result in erroneous data creeping into the system. In plate B, the label on the plate for the Least Carpet seems to have reverted to *vulpinaria* (the correct name of *rusticata* appears in the caption and in the text).

In the gap between ‘Skinner 2’ selling out and ‘Skinner 3’ appearing, there has been published an alternative guide in the form of Paul Waring’s and Martin Townsend’s *Field Guide to the Moths of Great Britain and Ireland* (British Wildlife Publishing), so the obvious question that the average moth enthusiast will ask is ‘do I actually need to buy Skinner 3?’ The answer is a resounding ‘yes’. Whilst I do not wish to be at all rude to messrs. Townsend and Waring, both of whom I know as friends, their excellent and enormously popular book showing moths in their resting positions falls down in that the paintings, by Richard Lewington, do not other than in a very few cases, depict any hindwings. Their book panders, to some extent, to the growing number of former birdwatchers who have been ‘converted’ to moths but who have brought with them the notion that collecting a specimen is bad. Whilst I wholly agree that birds should not be collected, in any stage, it is impossible in many cases to reliably name moths without at least handling them and examining features not revealed in the Waring & Townsend book. So, quite apart from the value of using more than one literature source in any branch of entomology, especially at the amateur level, the answer is yes, you do need to buy this new edition of Bernard Skinner’s *magnum opus*. It is the one book that **all** British Isles moth enthusiasts ought to possess.

Colin W. Plant

Atlas of the fleas (Siphonaptera) of Britain and Ireland by R. S. George. 98 pp., 175 x 247 mm., paperback, ISBN: 978 0 90154 723 4. FSC Publications, 2008. £7.99.



Fleas are a somewhat neglected group of organisms; I wonder how many people could even begin to hazard a guess at the number of British species (according to this remarkable new book there are 60). Yet given the raised medical and veterinary significance of some species this seems surprising. This new 'flea atlas' is a product of the enormous enthusiasm and considerable dedication of Bob George who, ever since I can remember has, in the nicest possible way, been hassling, pestering, bullying, cajoling and otherwise persuading naturalists, both specialist and general, to provide him with fleas, or sources of fleas such as the contents of nest-boxes. It takes a special kind of man to actually *thank* me for giving him twenty plastic bags containing the contents of the same number of Blue Tit (*Parus caeruleus*) nest boxes

back in the mid-1970s – and I know that he methodically searched the contents of each and every one for his beloved fleas.

All British species are included; the degree of coverage of the British Isles is all the more remarkable when one considers that the maps have been produced more or less single-handedly. The decline of the human flea *Pulex irritans* is clear from the map (perhaps it should join some of our more common and widespread Lepidoptera in the UK Biodiversity Action Planning programme). The comparative rarity of the Dog Flea *Ctenophalides canis* in comparison with the widespread and common Cat Flea *C. felis felis* is evident (it seems that most fleas on pet dogs are actually cat fleas). The decline of *Leptopsylla segnis* reflects the decline of the House Mouse *Mus musculus*; the restricted distribution of *Typhloceras poppei poppei*, which affects Wood Mouse *Apodemus sylvaticus* is more of a mystery.

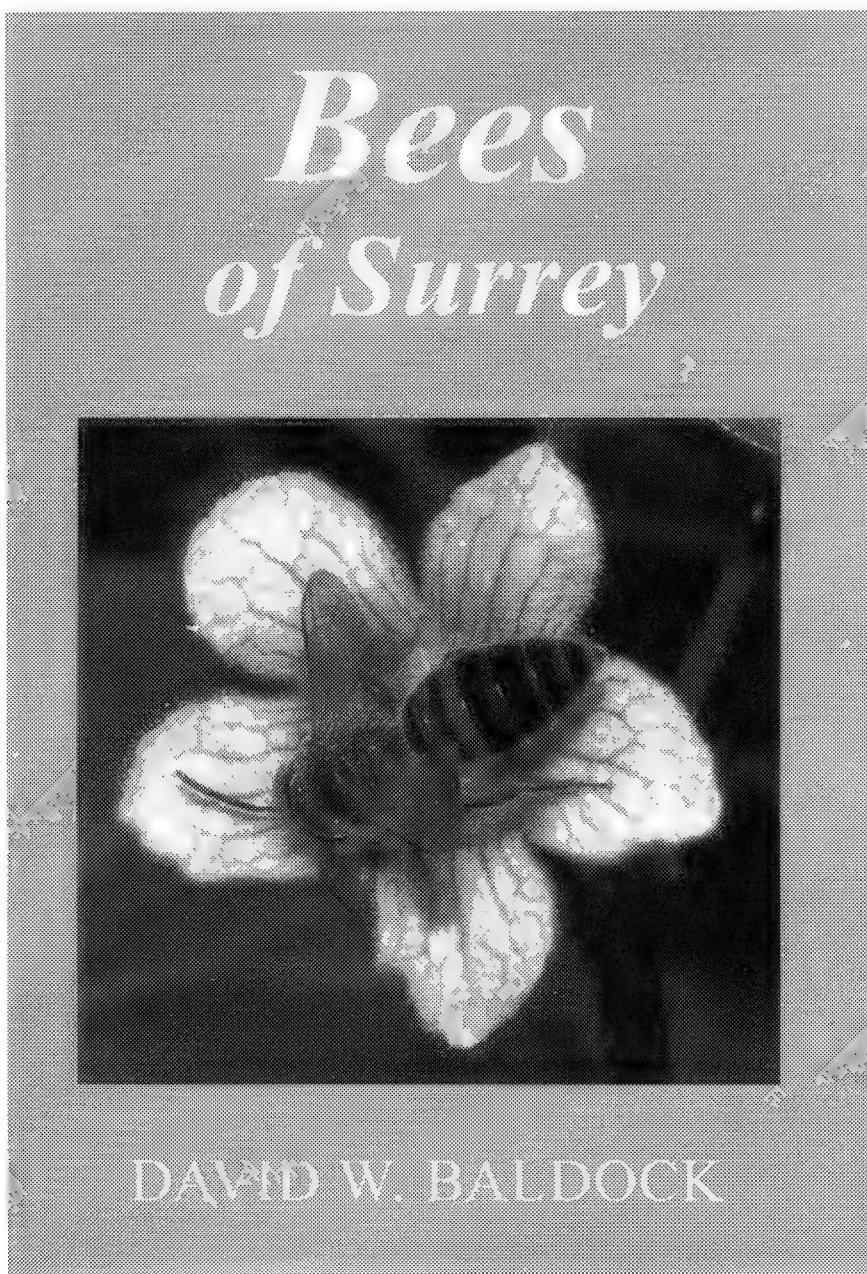
Receipt of this tome, which is edited for the Biological Records Centre by Paul Harding, has suddenly awoken in me a latent interest in fleas! Anyone clearing out a garden nest box or picking up the odd item of road-kill for the freezer (surely I am not alone?) is in a position to contribute to what Bob hopes is still an ongoing project (which he started, we understand, in 1950). Bird ringers, small mammal researchers and bat surveyors are in a unique position to make contributions of particular significance. Happily, we now have a modern identification guide to fleas in Britain (Whittaker, 2007), but in spite of his age, which it would be impolite of me to mention, Bob writes in the closing pages that he hopes '... to continue to accept and collate records of fleas from Britain and Ireland, and to provide an identification service, for many years'.

Reference

Whittaker, A. P., 2007. Fleas (Siphonaptera). *Handbooks for the identification of British insects, Volume 1, part 1b (2nd edition)*. Field Studies Council.

Colin W. Plant

Bees of Surrey by **David W. Baldoek**. 304 pp., 155 x 217 mm., hardback, ISBN: 978 0 9556188 1 9. Surrey Wildlife Trust, 2008. £16 plus £2.40 postage and packing if ordered direct.



This eleventh volume in the series *The ... of Surrey* does not disappoint. The popularity of bees was raised significantly with the publication of keys to genera by Willmer (1985) which made this 'difficult' group attractive to a whole new generation of entomologists. Significant strides in the identification to species level of most groups of bees were made in the ensuing ten or so years and facilitated the much improved species-level recording which followed (although the genera *Andrena*, *Lasioglossum* and to a lesser extent *Nomada* probably remain a complete mystery to the few British entomologists who do not have 'bootleg' copies of the draft keys whose publication seems scarcely likely to ever take place). A new key to genera, well-appointed with line drawings, is provided by Graham Collins as a contributed section to this book; testing this with specimens from my own collection has so far shown it to work easily.

Surrey appears to be a well-recorded county, with 222 species known to date, making it one of the more significant counties of Britain in terms of this group of insects. That we know this is certainly due in great part to the dedicated efforts of David Baldoek and a few other stalwarts. Overall, the work suggests that most of the bees recorded in Surrey are doing fairly well there, apart from bumble bees, genus *Bombus*, whose numbers seems to be in freefall both here and in many other areas of the country. The concise yet comprehensive text for each species presents a valuable resource of information that will be of profound value to ecologists and land managers alike whilst the high quality colour photographs make this a very attractive volume to non-specialists whose interests remain to be developed.

References

- Willmer, P., 1985. *Bees, ants and wasps. A key to the genera of British Aculeates*. Field Studies Council.

Colin W. Plant

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***Cosmopterix zieglerella* (Hb.) (Lep.: Cosmopterigidae) near Reading, Berkshire**

On 21 August 2008 numerous mines of *Cosmopterix zieglerella* (Hb.) were discovered in hop *Humulus lupulus* leaves at Davis Street, Hurst near Reading, Berkshire. A sample was collected from which one adult emerged (indoors) on 11 January 2009.

The discovery of *C. zieglerella* at Davis Street is of note for several reasons. Firstly, it is a scarce species in the county, having been recorded from only three localities until now. The first county record for *C. zieglerella* is that given by Brian Baker (1994. *Butterflies and moths of Berkshire*), of moths reared by Dolton from larvae found in central Reading (Little John's Lane, off the Oxford Road) in 1944. Old mines were later discovered at Dry Sandford Pit in the north of the county, near Abingdon, in 1988, with a fresh mine found there in 1989 which subsequently produced an adult. The last locality given by Baker is of a mine found at Windsor in 1992.

Secondly, this strong colony at Davis Street appears to be spreading. Mines were found in hop leaves at two nearby locations: around 10 were seen near Sindlesham Mill, below the bridge where the M4 motorway crosses a minor road, on 4 September 2008, and two more were seen at Dinton Pastures Country Park, Hurst, on 15 September 2008. Thirdly, there is some evidence that species belonging to the genus *Cosmopterix* underwent a resurgence during 2008. Dr. John Langmaid told me that he has found *C. scribaiella* Zeller to be abundant on common reed *Phragmites australis* that autumn, with some leaves containing several mines. It will be interesting to see how the Davis Street colony of *C. zieglerella* fares over the next few years.— I. SIMS, 2 The Delph, Lower Earley, Reading, Berkshire RG6 3AN.

Daily fluctuations in the numbers of the louse fly *Crataerina pallida* (Latreille 1812) (Dip.: Hippoboscidae) seen at Common Swift *Apus apus* nests

The Louse Fly *Crataerina pallida* is a blood sucking nest parasite of the Common Swift *Apus apus* (L.) (Aves: Apodidae). Louse flies are closely associated with their hosts nests, moving onto the adult and nestling swifts approximately once every five days in order to feed. No effect of Louse Fly parasitism upon the host has been found (Lee & Clayton. 1995. *Ecological entomology* 20: 43-50; Tompkins, Jones & Clayton. 1996. *Functional ecology* 10: 733-740). This could be because the levels of parasite abundance seen did not truly reflect this parasites true population size. Parasite counts were made on only a few occasions. The stability of louse fly numbers at nests over time is unknown.

Common Swifts have established a nesting colony within a road bridge which spans the Bigge Reservoir close to the German town of Olpe at UTM reference 51°04'00"N; 07°81'00"E. I studied the breeding behaviour of swifts here between the months of May and July 2007. The number of louse flies in each swift nest was counted on a regular basis.

Surprisingly the number of louse flies seen at individual nests rarely remained constant between days. Sometimes even great fluctuations in louse fly number occurred per nest from one day to the next. This best shown by considering individual nests. For example at nest OL-K5-72 the number of louse flies seen on 12 June was 27, the day after it had dropped to 12, dropped to 6 on 14 June, only to increase to 23 on 15 June, again to fall to 12 on the 16th. Another example was DR-K6-228 where great fluctuations occurred. At this nest on 25 June the number of Louse Flies seen was 20, on the day after it had dropped to 15, while on the 27th it had again increased to 20; thereafter the number seen began to fall, with 18 on 28 June, 15 on 29 June and five on 30 June.

Considering all 47 Swift nests, there were 26 separate occasions where the population of louse flies changed by five or more over a single 24 hour period at single nests. On six of these occasions louse fly numbers increased, but decreases were more common occurring 20 times. There were five instances where louse fly populations changed by more than 10 from one day to the next. Such fluctuations were most prominent at nests with highest numbers of parasites, but even at nests with fewer parasites the number seen from day to day rarely remained constant simply not fluctuating by as large a range.

It is likely that the reason for these fluctuations is that louse fly move alternately between the nests and the adult swifts as and when they feed. A decrease in adult louse fly populations in the nest may mean that more are to be found on the adult Swifts. I believe it is unlikely that these changes in the nest population size are caused by death of the flies or by hatching of new adults. Although the life-cycle of this parasite is not well known it is unlikely that large numbers of flies would die or hatch out over such short periods of time.

These fluctuations have important implications for studies studying the effects of parasitism in this host-parasite system. Single or a small number of censuses of louse fly populations on either the adult hosts or in the nests may not reflect the true level of parasitism these hosts are exposed to. The abundance of parasitism should be studied over many occasions to gain a more realistic view of parasitic abundance. This observation shows the difficulty of estimating the true level of parasitism experienced by wild birds and the importance of studying parasite life-history before attempting to understand the functioning of host-parasite systems.— MARK D. WALKER, 10 The Ridgeway, Coal Aston, Sheffield S18 3BY (Email: mark_david_walker@yahoo.co.uk).

First locality of *Euchalcia chlorocharis* (Dufay, 1961) in Albania and first reports for *Hadena tephroleuca* (Boisduval, 1833), *Proxenus hospes* (Freyer, 1831), *Amphipoea oculea* (L., 1761) and *Agrotis syricola* Corti & Draudt, 1933 in the Republic of Macedonia (Lep.: Noctuidae)

Euchalcia chlorocharis (Dufay, 1961) is a Balkan endemic mentioned only once from Albania, but without any collecting data (Beshkov, S., 2000: *An Annotated Systematic and Synonymic Check List of the Noctuidae of Bulgaria (Insecta: Lepidoptera: Noctuidae)*. *Neue Entomologische Nachrichten* **49**: 1 – 300.). It is also known from the Republic of Macedonia and from Greece. The reports for *Euchalcia paulina* (Stdgr., 1892) for Macedonia (Petrina Planina Mountains near the town of Ohrid), wrongly considered by Kostrowicki (1961: 420, 415, fig. 21: Studies on the Palaearctic Species of the Subfamily Plusiinae (Lepidoptera, Phalaenidae). *Acta Zoologica Cracoviensis* **6**(10): 367: 472) to relate to *Euchalcia emichi* (Rogenhofer & Mann, 1873), in fact must refer to *E. chlorocharis* (see also in Dufay, 1968: 115, 123, 126: Revision des Plusiinae Paléarctiques I. Monographie du Genre *Euchalcia* Hübner. – *Veröffentlichungen der Zoologischen Staatssammlung München* **12**: 21-154 + Pl. I-XIII.). *Euchalcia modesta* ab. *viridis* Stdgr. is reported from Macedonia, Ohrid (Turner, 1938: 159: Die Schmetterlinge der Ochrid-Gegend in Macedonien. – *Mitt. Kgl. Naturwiss. Inst. Sofia*, **11**: 121-179.). *Euchalcia viridis* is a full species, known from Turkey only and has never been found in the Balkan Peninsula nor in Europe.

In recent reference books (Goater, B, Ronkay, L. & Fibiger, M., 2003. *Catocalinae & Plusiinae. Noctuidae Europeae*, volume 10, Sorø, Entomological Press; Ronkay, L., Ronkay, G. & Behounek, G, 2008. *Plusiinae 1. A Taxonomical Atlas of the Eurasian and North African Noctuoidea. Volume 1.* – Heterocera Press, Budapest) *Euchalcia chlorocharis* is also not mentioned for Albania, as its range is restricted to Greece and Macedonia. In Goater et al (*op. cit.*) it is mentioned for Prespa [Macedonia], on the basis of a report by Hacker (1989: 582: *Die Noctuidae Griechenlands. Mit einer Übersicht über die Fauna des Balkanraumes (Lepidoptera, Noctuidae).* – *Herbipoliana*, 2. Eitschberger, Markleuthen).

In June, 1999 my colleague and friend Petko Tzvetkov gave me some moths that he had collected at Golyana Prespa Lake, Albania. Among these was one *Euchalcia chlorocharis*. Full collecting data for the Albanian specimen are: Albania, Golyama Prespa lake, Malka Goritza Village [Liqeni i Prespes se Madhe, Gorica e Vogël], 13.VI.1999, P. Tzvetkov leg., one male specimen collected at lamp on a building. The specimen is in bad condition and examination of the genitalia was necessary for correct identification. Here male genitalia (including everted vesica) are illustrated (Figs 1-2.) (Genital preparation and drawings by the author).

Hadena (Pinkercola) tephroleuca (Boisduval, 1833) is a species wrongly included for Bulgaria in Nowacki & Fibiger (1996: 282: *Noctuidae*. – In: Ole Karsholt & Jozef Razowski (eds): *The Lepidoptera of Europe*: 251-293), but it

is not impossible that it will be discovered here. From the Balkan Peninsula, *H. tephroleuca* is known from Greece at Nestos, Paranestion, near the Bulgarian/Greece border (Hacker, 1989: 582: *Die Noctuidae Griechenlands. Mit einer Übersicht über die Fauna des Balkanraumes (Lepidoptera, Noctuidae). – Herbipliana*, 2. Eitschberger, Markleuthen) and from Albania (Beshkov & Misja, 1995: A contribution to the knowledge of the *Lepidoptera* fauna of Albania. 1. Some materials from the collection of K. Misja in the Natural History Museum Tirana and some results of the collecting trip of Beshkov during 1992 (*Lepidoptera, Macrolepidoptera*). – *Atalanta* 26(1/2): 345-363.). In both these articles it is recorded as *Hadena tephroleuca asiatica* (F. Wagner, 1931). According to Hacker, H. (1996. Revision der Gattung Hadena Schrank, 1802 (Lepidoptera: Noctuidae). *Esperiana* 5: 7-697 + Tafs A-Y.) the subspecific identity of the Balkan population is unclear. Careful examination of the Albanian *H. tephroleuca* and comparison with specimens from Turkey and the Alps have shown that the population in Albania and Macedonia belongs to *Hadena tephroleuca tephroleuca* (Boisduval, 1833). In the Balkan Peninsula, *Hadena tephroleuca* is known also from the Durmitor Mountains in Montenegro (Carnelutti, Vasic, Tomic, Zecevik & Krakjcev, 1991. *Heterocera III. Noctuidae (Insecta, Lepidoptera)*. In: *Fauna Durmitora, Sveska 4. Posebna izdanja*, kn. 24., Odjeljenje prirodnih nauka, kn. 15: 79-134.; Hacker, Ronkay & Hreblay, 2002. *Hadeninae I. Noctuidae Europeae. 4*).

Our original data for *Hadena tephroleuca* from the Republic of Macedonia are: Galichitza (Petrina Planina) Mts, below Bulgarska Tchuka summit, 1803m, 41°00'09"N; 20°50'50"E, 19.vi.2008, S. Beshkov leg. at L.T. (black light), one male specimen; Galichitza (= Petrina Planina Mts), above "Dvata Yavora", below Bulgarska Tchuka summit, 1640m, 41°00'09"N; 20°51'12"E, 19.VI.2008, S. Beshkov leg. at lamps, one male specimen (Plate 25).

The collecting locality is situated just above old *Fagus* forest on east to south-east facing limestone mountain slopes with grassy vegetation (Plate 26). Some of the sympatric and synchroic species collected together with *Hadena tephroleuca* are: *Synaphe antennalis* (Fabr. 1794), *Spatialia orbifer* (Hb., 1823), *Panassius mnemosyne* (L., 1758), *Plebejus sephirus* (Frivaldszky, 1835), *Euphydryas aurinia* (Rottemburg, 1775), *Erebia medusa* ([D. & S., 1775]), *Melanargia russiae* (Esper, 1783), *Gnopharmia stevenaria* (Boisduval, 1840), *Schistostege decussata* ([D. & S., 1775]), *Plusidia cheiranthi* (Tauscher, 1809), *Omphalophana antirrhini* (Hb., [1803]), *Teinoptera olivina* (H.-S., 1852), *Caradrina suscianja* (Von Mentzer, 1981), *Caradrina wullschaegeli* Pungeler, 1903, *Hydrillula pallustris* (Hb., [1808]), *Anarta odontites* (Boisduval, 1829), *Sideridis lampra* (Schawerda, 1913), *Hadena caesia xanthophobia* (Schawerda, 1922) and *Hadena clara macedonica* Boursin, 1959.

Another new species for the fauna of the Republic of Macedonia is *Proxenus hospes* (Freyer, 1831). Collecting data are: Doyransko Ezero Lake, near Novi Doyran Village, 190m., 6.ix.1997, S. Beshkov, V. Gashtarov, M. & K. Beshkovi leg. at 160 W Hg, 25 W black lamps and light trap, 5 males; Babuna Planina Mts,



Plate 24. *Agrotis syricola*, male. Treska Gorge, Gorna Matka Village, Skopje Region, 560m, 12.ix.1997, S. Beshkov, V. Gashtarov, M. & K. Beshkovi leg.

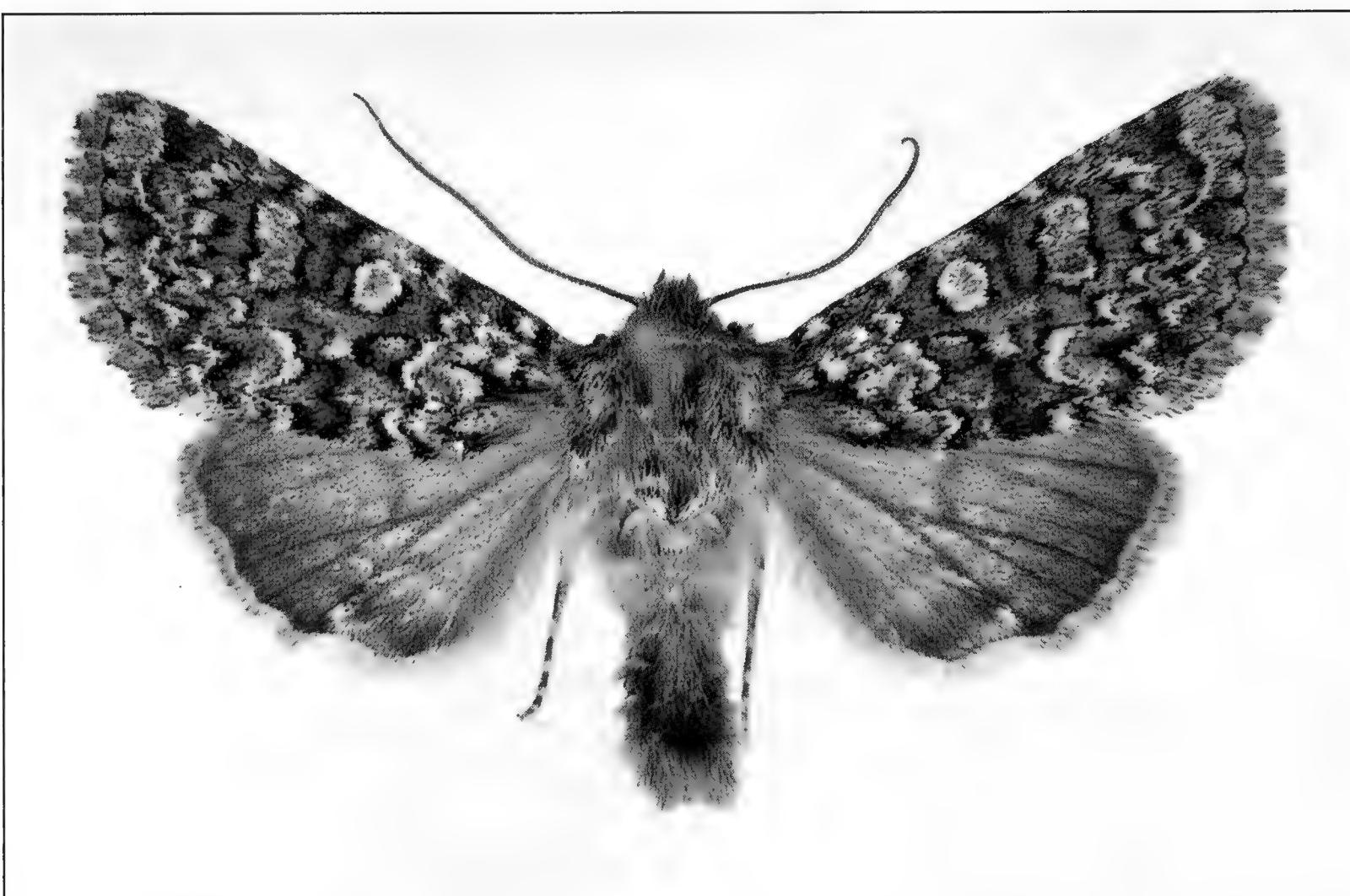


Plate 25. *Hadena tephroleuca tephroleuca*, male. Republic of Macedonia, Galichitza (= Petrina Planina Mountains), above "Dvata Yavora", below Bulgarska Tchuka Top, 1640m, 41°00'09"N; 20°51'12"E, 19.VI.2008, S. Beshkov leg.



Plate 26. Collecting locality of *Hadena tephroleuca*: Bulgarska Tchuka Top, 19.vi.2008.

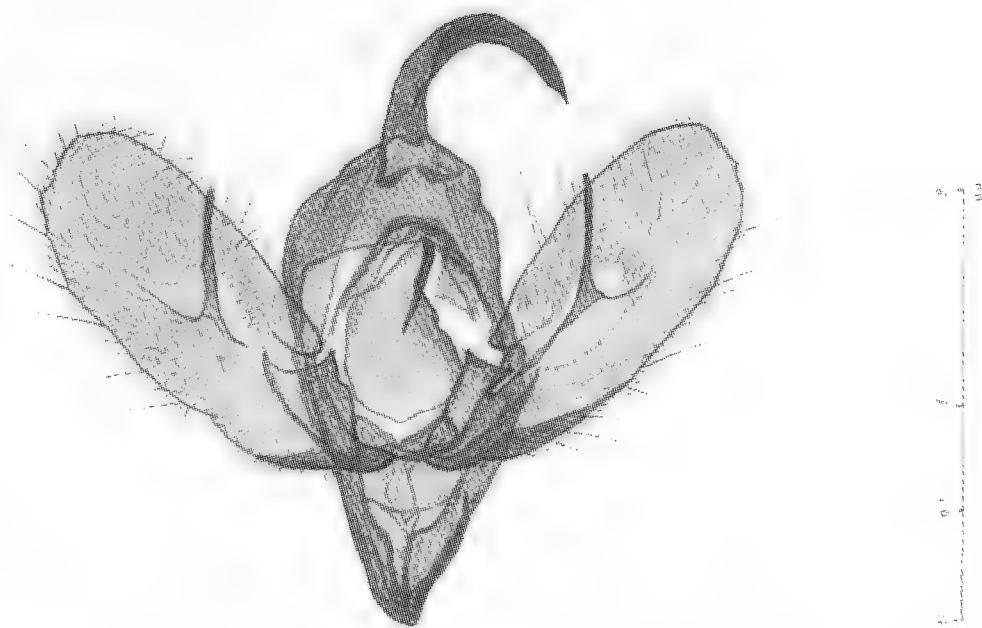


Figure 1.

Euchalcia chlorocharis, male, everted veica. Albania, Golyama Prespa lake, Malka Goritza Village [Liqeni i Prespes se Madhe, Gorica e Vogël], 13.VI.1999, P. Tzvetkov leg.

Figure 2.

Euchalcia chlorocharis, male, genital armature. Albania, Golyama Prespa lake, Malka Goritza Village [Liqeni i Prespes se Madhe, Gorica e Vogël], 13.VI.1999, P. Tzvetkov leg.



below Kozjak, 750m, between Pletvar and Drenovo, Prilep Region, 8.ix.1997, S. Beshkov, V. Gashtarov, M. & K. Beshkovi leg. at 160 W Hg, 25 W black lamps and light trap, one female.

Amphipoea oculea (L., 1761) is another new species for Republic of Macedonia with collecting data as follows: Treska Gorge, Gorna Matka Village, Skopje Region, 560m, 12.ix.1997, S. Beshkov, V. Gashtarov, M. & K. Beshkovi leg. at 160 W Hg, 25 W black lamps and light trap, one male (genitalia checked).

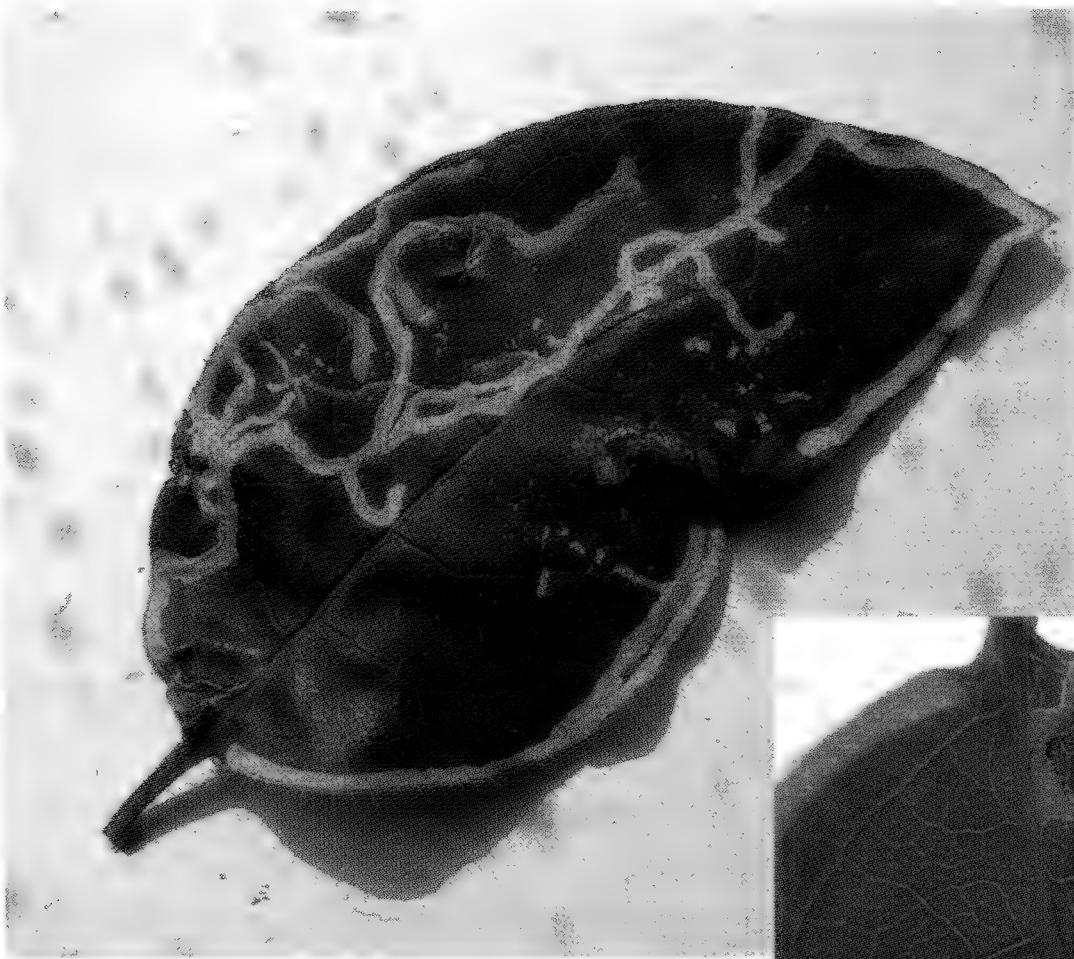
Agrotis syricola Corti & Draudt, 1933 has never been reported from Republic of Macedonia before, perhaps as a result of misidentification. It is sometime difficult, even impossible to be separate from *Agrotis puta*. Collecting data for *A. syricola* in Republic of Macedonia are: Treska Gorge, Gorna Matka Village, Skopje Region, 560m, 12.IX.1997, S. Beshkov, V. Gashtarov, M. & K. Beshkovi leg. at 160 W Hg, 25 W black lamps and light trap, one male (Plate 24); Vardar Valley, Demirkapija Gorge, the road to Klisure Village, 130m, 41°24'21N"; 22°16'59"E, 16.X.2007, S. Beshkov, J. Buszko, B. Zlatkov leg. at lamps and light traps, one male. Habitat in the last locality is maquis with *Quercus coccifera*, *Pistacia*, *Q. pubescens*, *Paliurus*, *Carpinus orientalis* and *Juniperus oxycedrus*. *Agrotis syricola* is a species well presented in Bulgaria, Greece, Albania and Turkey, as its real range is not clarified yet.

Other Noctuidae species reported for first time in Beshkov (2000: An Annotated Systematic and Synonymic Check List of the Noctuidae of Bulgaria (Insecta: Lepidoptera: Noctuidae). Neue Entomologische Nachrichten 49: 1 – 300.) for the Republic of Macedonia are *Pseudozarba bipartite* (H.- S., 1850), *Dryobotodes servadeii servadeii* Parenzan, 1982, *Leucania herrichii* (H.- S., 1849), *Epipsilia cervantes vargai* Fibiger, 1993 (= *E. c. gyulaipetri* Varga, 1975 (nomen nudum)), *Chersotis anatolica* (Draudt, 1936) and *Noctua janthe* (Borkhausen, 1792).

In fact, Varga, Z. (1975. Geographische Isolation und Subspeziation bei den Hochgebirgs-Lepidopteren der Balkanhalbinsel. – *Acta entomologica Jugoslavica* 11(1-2): 5-39.) recorded *Epipsilia cervantes gyulaipetri* for Bulgaria, Northern Greece and Republic of Macedonia. However, later on, Fibiger, M. (1993. *Noctuinae II. – Noctuidae Europeae. Vol. 2.* 230 pp. Sorø.) described *Epipsilia cervantes vargai* from Greece (type locality: Greece, Drama, Mt. Phalakron above Volas, 1700m.) and Bulgaria, Rila and Pirin Mts. and restricted the range of ssp. *vargai* to Bulgaria and Greece. According to Fibiger (1993: 22) *gyulaipetri* Varga, 1975 is a synonym of *Epipsilia cervantes cervantes* (Reisser, 1935). It is actually a synonym of *Epipsilia cervantes vargai* Fibiger, 1993. — STOYAN BESHKOV, National Museum of Natural History, Tsar Osvoboditel Blvd 1, 1000 Sofia, Bulgaria (E-mail: beshkov@nmnh.bas.bg).

Winter mines of *Chromatomyia aprilina* (Goureau 1851, Dip.: Agromyzidae): first UK records

On 26 February 2008, on Sevenoaks Common, West Kent (VC 16), I discovered tenanted dipterous mines on plants of Honeysuckle *Lonicera periclymenum* on the newly-emerged leaves in two separate places. These mines were something of a puzzle. The first fly miner in the year likely to be found on *Lonicera* is normally expected to be *Aulagromyza cornigera*, usually in April, but these mines did not conform to either the gallery pattern nor the frass pattern of that species. Indeed, morphologically they resembled *Chromatomyia lonicerae* with branching, with some tentative underside working near the start of the mine and with much more linear frass than the separated grains of *cornigera*. Although the date seemed incredibly early for the summer mining *C. lonicerae*, I conjectured that this might be an earlier generation arising as a result of global warming.



Photos: R. Homan

Plate 27. Winter mine of *chromatomyia aprilina* on leaf of *Lonicera periclymenum*, Sevenoaks, Kent. February 2009



Plate 28. Detail of frass pattern in the same leaf.

Willem Ellis showed an interest in these mines and requested photos of the mines. From these he tentatively confirmed the identification as *Chromatomyia aprilina* in an 'enigmatic' winter generation completely lacking the association with the leaf midrib that is normally expected in *C. aprilina* later in the year. This is a form of the mine that he had previously encountered in the Netherlands, but to his knowledge had not been previously recorded in the UK. He asked me to try

to bring the feeding larvae through to pupation and when I sent a photo of the highly distinctive green pupa with posterior spiracles projecting through the leaf surface, he confirmed the determination.

In the last few years I have observed mines like this in the early leaves of honeysuckle in February and March without being aware of their significance. My hunch is that mines of this species are likely to be found to be widespread in the UK on the early leaves of honeysuckle in February and March and conceivably earlier, appearing like the *Eriocrania* species of Lepidoptera on Birch, *Betula*, soon after the unfolding of the leaves. It occurs at a time when leaf mining enthusiasts are unlikely to be active in the field and therefore I suspect it has been long overlooked. The species was also located in 2009 in Gloucestershire in early March by Robert Homan and these two observations appear to constitute the first UK records for this unusual winter form of *Chromatomyia aprilina*.

I would like to thank Willem Ellis for kindly determining the mines collected and Robert Homan for his additional record and for supplying the photographs to accompany this article.— KEITH PALMER, Farthing House, Needles Passage, 40a The Mint, Rye, East Sussex TN31 7EN.

Noteworthy record of a late-flying Common Cockchafer *Melolontha melolontha* L. (Col.: Scarabaeidae) from a Rothamsted Light Trap.

During the period 3-5 August 2007, and again between the dates of 22 and 25 July 2008, single specimens of *Melolontha melolontha* were caught in the Rothamsted Insect Survey Light-trap at Wells-next-the-Sea in Norfolk (site 274: O. S. grid reference TF 917434). This species commonly occurs in light-traps during May and June, but these particular individuals were flying much later in the year than normal.

Also known as the ‘Maybug’, ‘Billy Witch’ or, particularly in East Anglia, ‘Spang Beetle’ (<http://en.wikipedia.org/wiki/Cockchafer>), *M. melolontha* is a ponderous, heavily built beetle up to 35mm in length. Adults feed upon the leaves and flowers of many plants and trees but rarely cause any serious damage in the UK. However, the large, white larvae (up to 45mm long when fully grown) live in the soil, feeding upon roots. They especially favour those of grasses and cereals but will also attack vegetables and other garden plants and can therefore occasionally be pests in pastures, nurseries and gardens (<http://www.kendall-bioresearch.co.uk/chafer.htm>). The larvae feed like this for up to four years before pupating. The adults emerge in September, but will remain buried (sometimes up to a metre below the surface) until the following Spring.

Many thanks to Nell Seal and other staff at Wells Field Centre for their hard work operating the light trap.— PHILIP J. L. GOULD, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ (E-mail: phil.gould@bbsrc.ac.uk).

Pebble Hook-tip *Drepana falcataria* (L.) (Lep.: Drepanidae) surviving in refrigerator

On 25 May 2009, a female Pebble Hook-tip *Drepana falcataria scotica* Bytinski-Salz emerged from an overwintering pupa at my home address in Banffshire. After photographing the moth I put it in a screw-top plastic container and placed it in the kitchen refrigerator, intending to release it later.

However, as my wife insists on using this refrigerator to store foodstuffs, the small pot containing the moth quickly became hidden behind jars of mayonnaise, stuffed olives and tartare sauce (if truth be told, I forgot about it.) The pot was not re-found until 2 July. To my great surprise, the moth was still alive, undamaged and apparently vigorous despite spending 38 days in the fridge at a temperature of around 4°C.

Members of the Drepanidae have a reduced haustellum and do not feed. Presumably the adults emerge with sufficient fat stores to sustain them. Even so, the moth's survival for this length of time is remarkable. It suggests that this species would be capable of sitting out a very protracted spell of cool weather until favourable conditions returned.— ROY LEVERTON, Whitewells, Ordiquhill, Cornhill, Banffshire AB45 2HS.

Scythris inspersella (Hb.) (Lep.: Scythrididae) in East Suffolk

On 20 June 2009 I was looking for *Mompha conturbatella* (Hb.) larvae at Tunstall Common in Suffolk. Spinnings in the top shoots of Rosebay Willow-herb *Epilobium angustifolium* there were reasonably plentiful and easy to find. They did not, however, match descriptions for *M. conturbatella* as they were rather untidy and contorted the shoots. I considered the possibility that the spinnings may be due to *Clepsis spectrana* (Tr.), as I had read that the spinnings of this species caused similar distortion, although the larvae did not match images on the UKMoths web site.

On 9 July 2009 an adult that emerged was obviously not *C. spectrana* and, looking at other species that feed on *E. angustifolium*, I came to the conclusion that it must be *Scythris inspersella*. I am grateful to John Langmaid for his help in confirming the identity of the specimen.

This species is apparently extremely local in its British distribution. First noted in 1977 in north-west Norfolk it is locally abundant on parts of the north Norfolk coast in the vice-county of West Norfolk (Emmet & Langmaid, 2002. *Moths and butterflies of Great Britain and Ireland* 4(1): 292 – 293), but is apparently not yet recorded elsewhere except for the record now reported.— TONY PRICHARD, 3 Powling Road, Ipswich, Suffolk IP3 9JR.

GRASSHOPPERS AND BUSH-CRICKETS (ORTHOPTERA) OF MILITARY TRAINING GROUNDS NEAR COLCHESTER

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Abstract

The Orthoptera of three military training areas near Colchester in Essex have been surveyed since 1980. Two locally scarce orthopterans were recorded: Mottled Grasshopper *Myrmeleotettix maculatus* Thunberg and Great Green Bush-cricket *Tettigonia viridissima* L. *M. maculatus* is a bare earth specialist and can be classed as disturbance-dependent, whereas *T. viridissima* is a disturbance-averse insect of scrub. Disturbance-dependent insects are reliant on explosions and vehicular usage on Ministry of Defence (MoD) sites to maintain patches of exposed soil, whereas those averse to disturbance need an absence of these activities. Military usage may create the necessary patchwork of vegetation cover needed by both types of insect.

Keywords: Disturbance, Acrididae, Tettigoniidae, bare earth, succession

Introduction

The importance of military training areas for insects has been highlighted in a study in Germany (Warren & Büttner, 2009), whereas in the UK, Marren (2002) cheerfully says '*thank goodness for tanks and artillery*' in his New Naturalist guide to Nature Conservation, highlighting how important military areas can be due to their protection from the ravages of intensive agriculture and urban development. From an insect point of view, the value of Friday Wood (OS grid reference: TL 9820) near Colchester in Essex, owned by the Ministry of Defence (MoD), has long been known, particularly for White Admiral *Limenitis camilla* L. and White-letter Hairstreak *Satyrus w-album* Knoch butterflies. However, less well documented are the grasshoppers and bush-crickets (Orthoptera), which can be abundant in areas where military exercises such as rifle firing and tank driving create the necessary habitat conditions for survival.

Warren & Büttner (2009) highlighted that disturbance caused by military activities can help conserve populations of Blue-winged Grasshopper *Oedipoda caerulescens* L., which needs plentiful (30-50%) bare earth in its habitat. Many insects can be classified as either disturbance-dependent or disturbance-averse depending on the level of disturbance of the vegetation cover they need to persist. Bare earth provides sites where grasshoppers can bask to warm up (exposed soil is often much hotter than surrounding vegetation (Key, 2000)) and where adult females of species such as Meadow Grasshopper *Chorthippus parallelus* Zett., which lay their egg pods in exposed soil (Choudhuri, 1958), can deposit their egg load after mating. Bare earth is the earliest stage of succession (Fig. 1), and is often lacking in grasslands due to a dearth of soil disturbance caused by an

absence of grazing livestock or hay cutting with a tractor. Grasslands without management can become tall and rank and have little exposed soil (Ausden & Treweek, 1995).

Figure 1. Level of disturbance-dependence for the 10 Orthoptera species recorded on the Colchester ranges, successional stages, microclimatic temperatures and habitats are shown.

Succession	Microclimate	Habitats	DISTURBANCE-DEPENDENT
Pioneer	Hot	Short grass (<10 cm height)/bare earth	<i>Myrmeleotettix maculatus</i> <i>Chorthippus brunneus</i>
		Long grass (>10 cm height)	<i>Chorthippus albomarginatus</i> <i>Chorthippus parallelus</i> <i>Conocephalus dorsalis</i> <i>Metrioptera roeselii</i>
		Scrub	<i>Pholidoptera griseoaptera</i> <i>Tettigonia viridissima</i>
Climax	Cold	Woodland	<i>Leptophyes punctatissima</i> <i>Meconema thalassinum</i>
DISTURBANCE-AVERSE			

At Friday Wood (90 hectares), four grasshopper (Acrididae) and four bush-cricket (Tettigoniidae) species have been recorded (Table 1), making this a valuable site for Orthoptera in the county (Wake, 1997). Its importance is further enhanced by the presence of Mottled Grasshopper *Myrmeleotettix maculatus* Thunberg, a rare disturbance-dependent insect (Fig. 1) in Essex, found on heathland near to the wood, which has plentiful bare earth. Management by the MoD keeps this area of heathland open and free from scrub encroachment and much Gorse *Ulex europaeus* scrub has been removed in recent years. The habitat of *M. maculatus* is criss-crossed by broad, stony tracks and the un-vegetated ground they use for basking and often for stridulation is mainly the ridges formed on and next to these tracks used by walkers and horse-riders. However, this grasshopper is also found quite a long way from these tracks where the grasses are fine, short and quite sparse. There seems to be a very strong association with carpets of the moss *Polytrichum juniperinum* Hedw. Females have been observed ovipositing by pressing their abdomens down among tufts of the moss.

The ancient woodland is populated by Oak Bush-cricket *Meconema thalassinum* De Geer and Speckled Bush-cricket *Leptophyes punctatissima* Bosc, both disturbance-averse insects that seem to build up large colonies in wooded habitats of considerable age (Fig. 1). Other Orthoptera species found in Friday Wood include Roesel's Bush-cricket *Metrioptera roeselii* Hagenbach and Lesser Marsh Grasshopper *Chorthippus albomarginatus* De Geer, both insects expanding their range in the county due to climate change (Wake, 1997).

Middlewick Ranges (grid ref: TM 0022, area: 41 ha) is one of the best locations for Orthoptera in the county with nine species recorded (four grasshoppers, five bush-crickets; Wake, 1997; Table 1). The firing ranges are inhabited by the Essex Red Data List species (Gardiner & Harvey, 2004) Great Green Bush-cricket *Tettigonia viridissima* L. and *M. maculatus*. What is astonishing about the habitat of *M. maculatus* at the ranges is that this species is found in irregular hollows with hardly any vegetation cover at all (80 – 90% bare earth) behind the main targets. What maintains the habitat in this exposed state is a matter for discussion, but the military usage of the ranges must have some bearing on the abundance of bare earth in addition to motorbike scrambling and occasional fires (deliberately started or otherwise). Heavy vehicular usage would certainly churn up the vegetation and prevent succession to tall grassland and scrub, as would explosions. Such activities are essential for disturbance-dependent insects.

In Essex, there are only seven known sites remaining for *M. maculatus*, of which three have been MoD firing ranges at some time (Gunner's Park in Shoeburyness is now owned by Essex Wildlife Trust, but was formerly a MoD rifle range and has a small colony). The MoD therefore appears to be a champion for this rare grasshopper in the county and helps to clear scrub at the ranges to prevent loss of valuable bare earth. Indeed, a clear policy of the MoD is “*to ensure that natural environment issues are fully integrated with operational and training requirements and safety issues*” (*JSP 362 Chapter 5 Natural Environment (Conservation)*. www.mod.uk). The MoD is advised by Colchester Borough Council, Colchester Natural History Society and Natural England in Essex.

The Orthoptera of Middlewick Ranges have fared pretty well compared to the butterflies. Grayling *Hipparchia semele* became extinct at the site in 1991 (Benton & Firmin, 2002). It is suggested by Benton & Firmin that there is a strong correlation between the former sites of *H. semele* and *M. maculatus* in north-east Essex as they prefer similar habitats with patchy vegetation cover.

Field Grasshopper *Chorthippus brunneus* Thunberg is also abundant on the ranges and is another disturbance-dependent insect that requires bare earth in a habitat (Marshall & Haes, 1988) (Fig. 1). The importance of disturbance is illustrated by the abundance of this grasshopper on public footpaths in the Chelmsford area, walkers churning up the soil (Gardiner, 2006). Illegal motorbike usage on footpaths could also create the necessary bare earth to sustain populations of grasshoppers and other invertebrates, despite the nuisance it causes to landowners and walkers. *T. viridissima* (one of the UK's largest insects at 4–5 cm long) is found in scrub on the ranges, as is Dark Bush-cricket *Pholidoptera griseoaptera* De Geer, highlighting the importance of having a diversity of habitats at differing stages of succession to optimise the number of insect species (Fig. 1).

Military management leads to a diversity (heterogeneity) of vegetation cover (e.g. patchy grass and scrub) due to the randomness of explosions and vehicular usage (Warren & Büttner, 2009). Perhaps the only other site to match the

Table 1. Orthoptera species recorded on the three Colchester military training grounds (X indicates presence, * Essex Red Data List species)

Family/species	Fingringhoe Ranges	Friday Wood	Middlewick Ranges
Acrididae (grasshoppers)			
<i>Chorthippus albomarginatus</i>	X	X	X
<i>Chorthippus brunneus</i>	X	X	X
<i>Chorthippus parallelus</i>	X	X	X
<i>Myrmeleotettix maculatus</i> *		X	X
Tettigoniidae (bush-crickets)			
<i>Conocephalus dorsalis</i>	X		
<i>Leptophyes punctatissima</i>	X	X	X
<i>Meconema thalassinum</i>	X	X	X
<i>Metrioptera roeselii</i>	X	X	X
<i>Pholidoptera griseoaptera</i>		X	X
<i>Tettigonia viridissima</i> *			X

importance of Middlewick Ranges for Orthoptera in north-east Essex is Colne Point, where *M. maculatus*, Grey Bush-cricket *Platycleis albopunctata* Goeze (as well as Lesser Cockroach *Ectobius panzeri* Stephens) inhabit the sand dunes of this coastal spit. Military activity can also have incidental benefits for Orthoptera; for example, the Field Cricket *Gryllus campestris* L. was probably accidentally introduced onto MoD land near Shoeburyness in 1985 on army equipment from Germany (Wake, 1997). However, extensive searches could not find a breeding colony and this cricket is now thought to be extinct in the county.

Fingringhoe Ranges (grid ref: TM 0318, area: c. 200 ha) have also been thoroughly surveyed for Orthoptera over the years and a total of three grasshopper and four bush-cricket species have been recorded (Table 1). Notably, the long-winged form of Short-winged Conehead *Conocephalus dorsalis* (f. *burri*) Latrielle was recorded in 1983 by Alan Wake on the ranges. Reports of sightings of the long-winged form are particularly rare in the county, the only other sightings occurring in 1984, 2004 and 2007. Fingringhoe Ranges also have large populations of *C. albomarginatus*, *C. parallelus* and *M. roeselii*, all species common in coastal habitats.

Orthoptera are known to be part of the diet of raptorial birds at Fingringhoe Ranges according to pellet analysis conducted by Peter Winter in the 1980s. In correspondence to Alan Wake (previous County Recorder for Orthoptera), he described finding grasshopper remains in the pellets of Kestrels *Falco tinnunculus* L. at the ranges. Peter described the importance of grasshoppers in the diet of raptors as a supplement to small mammal prey such as Harvest Mice

Micromys minutus Pallas and Common Shrews *Sorex araneus* L. at the ranges. The ecological significance of large populations of grasshoppers and bush-crickets as prey for other animals should not be underestimated and they support many food chains (Gardiner & Hassall 2009). In conclusion, the three Colchester ranges support four grasshopper and six bush-cricket species, and have populations of the disturbance-dependent grasshopper, *M. maculatus*, and the disturbance-averse, *T. viridissima* (Fig. 1). The large area of the ranges (Friday Wood 90 ha, Fingringhoe Ranges 200 ha) leads to high connectivity of habitat, which is important for Orthoptera (Warren & Büttner 2009), particularly sedentary grasshoppers such as *M. maculatus*.

Acknowledgements

Thanks are due to the members of the Colchester Natural History Society who have worked hard at recording Orthoptera in the north-east of the county, especially Alan Wake, Jerry Bowdrey and Ray Ruffell.

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The Dark Umber *Philereme transversata* (Hufn.) (Lep.: Geometridae), a first for Northumberland

On the night of 29/30 July 2008 a single specimen of *Philereme transversata* was caught in the Rothamsted Insect Survey light-trap at Kielder in south Northumberland, VC 67 (site 637: O. S. grid reference NY 623942).

Philereme transversata is a species of chalk downland, limestone hills, hedgerows, fenland and woodland and is widespread and well distributed in the southern half of England (Skinner, 1984. *Colour Identification Guide to Moths of the British Isles*. Viking). It is found very locally in south Wales, and occurs sporadically from the Wash northwards to Yorkshire and south Cumbria (Waring, Townsend, & Lewington, 2003. *Field Guide to the Moths of Great Britain & Ireland*. British Wildlife Publishing). The larvae feed on Buckthorn (*Rhamnus cathartica*) and Alder Buckthorn (*Frangula alnus*).

My thanks to Gordon Riley for operating the light-trap; to David Kipling for his hard work identifying the catches and for alerting me to the importance of this specimen; and to Keith Regan, the Northumberland recorder, for confirming this record as a first for the county.— PHILIP J. L. GOULD, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ (E-mail: phil.gould@bbsrc.ac.uk).

***Grapholita caecana* (Schläger) (Lep.: Tortricidae) in Bedfordshire**

Totternhoe Quarry (O.S. grid reference SP 9822) in Bedfordshire (VC 30) is a site from which Totternhoe Stone was quarried. The site, which has steep gullies forming valleys from which the stone was mined and transported, has now developed an impressive chalk grassland flora. The site is owned by the Wildlife Trust, and is a *Site of Special Scientific Interest*.

During a Wildlife Trust meeting at the site on 2 June 2009 a number of micro-moths were netted by David Withers and sent to me for identification. These included one specimen of *Grapholita caecana*. In Bradley (1979. *British Tortricoid Moths, Tortricidae: Olethreutinae*), this species is said to be restricted almost entirely to south-east Kent, and known also from sites on the Downs in Wiltshire.— DAVID MANNING, 27 Glebe Rise, Sharnbrook, Bedford MK44 1JB.

Erratum slip for the 3rd Edition of 'Skinner'

Apollo Books have asked me to advise readers that an erratum slip is available *free of charge* for the recently published 3rd edition of *Colour Identification Guide to Moths of the British Isles* by Bernard Skinner. This may be had direct from the publishers at Apollo Books, Kirkeby Sand 19, DK-5771 Stenstrup, Denmark (www.apollobooks.com).

A LIST OF THE BUTTERFLIES (LEPIDOPTERA) OF PETRA, SOUTHERN JORDAN

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Abstract

An updated list of the butterflies of Petra in southern Jordan is given based on this study, from 2004 to 2008 and previous records. Of the 50 recorded species, six are considered to be likely additions to the known fauna: *Pyrgus melotis* Duponchel, 1834, *Spialia doris doris* Walker, 1870, *Anthene amarah amarah* Guerin-Meneville, 1847, *Azanus ubaldus* Cramer, 1782, *Pseudophilotes abencerragus nabataeus* Graves, 1925 and *Catopsilia florella* Fabricius, 1775. Collecting sites and various plant host species are given for each butterflies species. This relatively high faunal diversity of butterflies in Petra is related to the coexistence of mosaic pattern of phytogeographical elements (Mediterranean, Saharo-Arabian, Irano-Teranian and Nubo-Sindian) although the annual precipitation is relatively low.

Key words: Butterflies, Petra, Southern Jordan

Introduction

Petra is located in southern part of Jordan between longitudes 35°E and 38°E and between latitudes 31° 30' N and 34° N. The area of study is dominated mainly by a Saharo-Arabian element which has annual precipitation not exceeding 300mm. Elsewhere the influence is Mediterranean, which dominates the upper heights, Irano-turanian and Nubo-Sindian – both along the strip from Petra to Aqaba. The western regions higher than 1000m above sea level were dominated by vegetation types similar to those found in northern heights, whilst *Aretmisia* vegetation characterises the Irano-Turnain element which extends from Petra to Tafileh (Karim & Al-Quran, 1988; Zohary, 1973; Zohary & Feinbrun-Dothan, 1968-1986).

The main purpose of this research is to present and update the recorded butterflies of southern Jordan through two visits in the springs of 2004-2008.

Relatively few butterfly specimens were actually collected, probably because of the inhospitable climate and terrain of southern Jordan and the fauna associated with rocky mountains is poorly represented in the list of fifty recorded species.

Butterfly species

Syrichtus tessellum nomas Lederer is quite common in Palestine and Lebanon (Larsen & Nakamura, 1983). *Apharitis acamas acamas* Klug (Leopard Butterfly) occurs in northern Jordan from June to October while in the Jordan Valley it can be found in December. *Lycaena phlaeas timeus* Cramer was collected from the Jordan Valley as well as from densely forested areas; it seems to be a resident

species and occurs throughout the months of the year, with high abundance in May and June. *Lycaena thersamon omphale* Klug was collected from the Mediterranean zones and from several localities within the Irano-Turanian zone of Jordan. *Aricia agestis agestis* Denis & Schiffermuller is a rare species in Jordan. It was collected previously from several localities within the northern Mediterranean zone. It seems to have two broods, one in the spring and the second towards the end of the summer. *Azanus jesous* Guérin-Méneville collected previously from several localities along the Jordan Valley as well as from Aqaba. It is expected to be migrant in Jordan (Larsen & Nakamura, 1983). *Chilades galba* Lederer is also a migrant species common in the Jordan Valley and found locally in the northern Mediterranean zone and eastern desert. *Chilades trochylus* Freyer collected from several localities of Jordan. Several broods are possible from April through October. *Lampides boeticus* Linnaeus is found virtually in all types of habitats in Jordan. Collecting dates suggests that two broods emerge annually, one in May while the other in September. *Leptotes pirithous* Linnaeus is common during early autumn to December in the Jordan Valley and disappears thereafter. *Plebejus pylaon cleopatra* Hemming was found with three subspecies: *Plebejus pylaon nichollae* Elwes in Lebanon, *Plebejus pylaon cleopatra* Hemming in southern Palestine, and *Plebejus pylaon philbyi* Graves in Jordan (Graves, 1925; Hemming, 1932; Larsen & Nakamura, 1983). Larsen & Nakamura (1983) reported two subspecies occur in Jordan – *P. p. cleopatra*, common in the transitional zone between the Mediterranean and the Irano-Turanian zones, and *P. p. philbyi* in desert and arid habitats. So numbers of broods vary; one brood appears in the spring in the Mediterranean zone, while the other two are in more warm and dry habitats.

Polyommatus icarus zelleri Verity is the most common lycaenid in Jordan, inhabiting a wide range of habitats. It was collected from the northern and southern Mediterranean zones and the Jordan Valley as well as desert habitats. Multiple broods are indicated. *Tarucus rosaceus* Austaut was distributed in the sites with permanent water that hosted a wide variety of plants. *Zizeeria karsandra karsandra* Moore is common in the Jordan Valley, however, it was found to be local within the Mediterranean zones (Larsen & Nakamura, 1983). *Deudorix livia* Klug was collected from localities extending from the northern hills to the southern heights, including from forested areas. It is common during August and September and declines towards December. Larsen & Nakamura (1983) suggested a migratory status for this species. *Charaxes jasius jasius* Linnaeus is a very rare species, only one specimen was collected, from Rasun in the northern Mediterranean zone. *Danaus chrysippus chrysippus* Linnaeus is common in the Jordan Valley, where few specimens caught from the Eastern Desert and the Mediterranean region. Benyamin (1990) indicated the occurrence of *Junonia orithya here* Lang on the western side of the Jordan Valley north of the Dead Sea. *Limenitis reducta schiffermuelleri* Higgins is a rare species in Jordan. Larsen & Nakamura

(1983) mentioned that only two records of this species were known (Dibbin and Jarash).

Gegenes gambica Mabille and *Gegenes nostrodamus* Fabricius were collected from several localities from Jordan especially Jordan Valley and Zarka (Larsen & Nakamura, 1983). Two broods were recognised, one in the spring and the other in the late summer, while the peak activity is in September. *Pelopidas thrax* Hübner was collected from the Jordan Valley as well as from northern Mediterranean zone, mostly in September and November. The Millet Skipper is not common in Jordan. Larsen (1974) reported on the migratory behavior of this species in Lebanon. *Thymelicus acteon phoenix* Graves and *Thymelicus flava syriaca* Tutt were collected from the Jordan Valley and the northern and southern Mediterranean zones, primarily May. *Carcharodus alceae* Esper is a common species in Jordan found almost all year round. Localities are within the northern Mediterranean zone and the Jordan Valley. *Carcharodus staudei ambigua* Verity was collected from several localities within the northern Mediterranean zone, fringes of the eastern desert and the Jordan Valley. *Syrichtus proto hieromax* Hemming was originally described from Ajlun (Hemming, 1932), and seems to be localised in Jordan, Palestine and the coastal region of Lebanon.

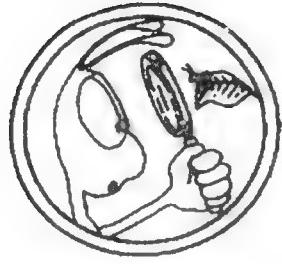
The subspecies *evanescens* of *Melitaea arduinna* is limited (Larsen & Nakamura, 1983) and it was considered as a rare species. *Melitaea deserticola macromaculata* Belter is found in the Mediterranean zones of Jordan and the fringes of the Jordan Valley as well as the southern desert (Pittaway, 1985). Its flight is much higher above the ground than that of other Jordanian *Melitaea*. Three broods are probable, the second and the third are partial and irregular (Larsen & Nakamura, 1983). *Melitaea phoebe telona* Fruhstorfer was thought to inhabit the Mediterranean zones only, while Fabiano (1998) reported them from the arid granite mountains (southern desert) overlooking the town of Aqaba. The first brood flies in April, while a second brood may occur later but in low numbers. *Melitaea trivia syriaca* Rebel is common in the Mediterranean zones, Jordan Valley and fringes of the eastern desert. Fabiano (1998) reported it from the southern desert. The data suggest a peak activity from April to June. *Polygonia egea* Cramer occurs mainly in the northern Mediterranean zone and found also in the Jordan Valley as far south as Petra (Ten Hagen, 1995). Three broods from March to November were observed. *Vanessa atalanta* Linnaeus is a scarce species in Jordan, mostly recorded from the northern Mediterranean zone and Jordan Valley, while *Vanessa cardui cardui* Linnaeus occurs in all parts of Jordan. *Hipparchia fatua sichaea* Lederer appear to oviposit at the onset of autumn. *Hyponephele lupinus centralis* Riley appears to be limited to the northern Mediterranean zone. It has a single brood in May and June or July. Specimens collected in August or September are assumed to be aestivating individuals appearing to oviposit (Larsen & Nakamura, 1983).

Lasiommata maera orientalis Heyne was collected mainly in the northern Mediterranean zone from April to July, which may represent two broods, but

Larsen & Nakamura (1983) expected a third late brood in September. *Lasiommata megera emilyssa* Verity was collected from the northern Mediterranean zone of Jordan as well as from Petra in the southern Mediterranean zone. It flies from February to August and probably to October (Larsen & Nakamura, 1983). *Maniola telmessia* Zeller is restricted to the northern Mediterranean zone. It has one brood in April and May. Specimens collected later in the year are aestivating individuals appearing to oviposit (Larsen & Nakamura, 1983). *Melanargia titea titania* Calberla is limited in Jordan to the northern Mediterranean and the southern Mediterranean zone also. Its peak activity appears to be in May. A second brood is possible towards the end of the year. *Pseudochazara telephassa* Hubner is the most common satyrid in Jordan occurring in both Mediterranean zones and the eastern desert. Larsen & Nakamura (1983) mentioned records from October and they assumed a single protracted brood. *Pseudotargumia pisidice* Klug was recorded from several localities in the northern Mediterranean zone only. *Ypthima asterope* Klug is common in the Mediterranean zones and the Jordan Valley; it appears to have many broods from March to November. Only one specimen is known from Al Azraq Reserve in the eastern desert (Amr et al., 1997).

Papilio alexanor maccabaeus Staudinger is a rare species found in the northern Mediterranean zone of Jordan and previously collected from Wadi Kufrangi and Wadi Zarqa (Larsen & Nakamura, 1983). *Papilio machaon syriacus* Verity occurs in the northern and southern Mediterranean zones and in the Jordan Valley. Larsen & Nakamura (1983) reported specimens as far south as Ras el Naqb. Collecting months suggest two broods, one in early March extending to May, followed by another in October. *Archon apollinus* Herbst is found in the Mediterranean zones and the Jordan Valley. Information suggests one brood annually that occurs in March and April. *Allancastria deyrollei eisneri* Bernardi is confined to the Mediterranean regions of Jordan and is less frequent in the Jordan Valley. It has been previously collected as far south as Petra in southern Jordan by Lockhart (Larsen & Nakamura, 1983). Peak activity occurs during April in a single brood and declines thereafter. *Allancastria cerisyi speciosa* Stichel occurs in coastal areas of Palestine and Lebanon, but it appears that it can not penetrate inland (Larsen & Nakamura, 1983). *Colias crocea crocea* Geoffroy is common throughout the Mediterranean and the Irano-Turanian zones. Collecting dates suggest that it has several broods that fly all-year round. *Gonepteryx cleopatra taurica* Staudinger is a forest-adapted species. Larsen & Nakamura (1983) gave several localities within the northern Mediterranean zone but only one locality in northern Jordan. The decline in its numbers and distribution may reflect the degradation of forests in Jordan.

Pieris brassicae Linneaus is a migrant species common in the Mediterranean zones of Jordan and it penetrates the Jordan Valley. Its presence throughout of the year suggests that it have several broods. *Pieris rapae leucosoma* Schawerda is mostly associated with the Mediterranean ecozone and the Jordan Valley. It was



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Please see the AES website for full and up to date listings of AES and other events.
All AES events are free to members and their guests.

Further details can also be obtained from the Secretary by post or via email (secretary@amentsoc.org)

Friday 21st and Saturday 22nd August

OSTERLEY PARK BIOBLITZ

This will involve moth trapping on Friday evening, 8 pm until late. Traps will be left overnight and stored in a cool place the next morning, for examination of contents at 10 am. There will be a talk by the National Trust about their conservation work before lunch, and after lunch the insect fauna of the ancient meadows and woodlands at Osterley will be surveyed.

Booking is required for catering purposes – a Box Office has been set up – telephone **0208 232 5050**. The event is free but when you ring the box office you can if you wish pre-order a National Trust homemade packed lunch. This costs £5.70 and consists of a choice of sandwiches (either egg & cress or cheese and apple chutney) home made flapjack, bottle of water, piece of fruit and a packet of Tyrell crisps). Or you can bring your own lunch of course, or queue at the NT cafeteria!

Thursday 27th August:

VISIT TO THE WORLD MUSEUM, LIVERPOOL

William Brown Street, Liverpool, L3 8EN. 11:00 - 4:00

This event will involve a tour of the museum's extensive insect collections, and a guided visit to the Bughouse and the Clore Natural History Centre. Members of the local entomological and natural history societies and their guests are welcome to attend. It would help us if you could please let the AES secretary (or Guy Knight at the Museum) know if you plan to attend – secretary@amentsoc.org.

Saturday 12th September:

INSECTS AT THE OXFORD UNIVERSITY MUSEUM OF NATURAL HISTORY

Parks Road, Oxford OX1 3PW. 11:00 – 4:00.

Meet up at the Museum's entomology department (upstairs) at 11:00 am.

This event will start with an insect walk in the nearby University Parks, including using a vacuum sampler, followed by lunch and examining insects in the Museum. Microscopes will be provided. There will also be a tour of the Hope Entomological Collections and for younger (or young at heart) members there will be opportunities to handle live insects and tarantulas etc. This event will be led by Darren Mann. It would help with the arrangements if you could please let the AES secretary know if you plan to attend – secretary@amentsoc.org.

Friday 18th September:

National Moth Night at Perivale Wood Nature Reserve

From 7:15pm until late. Entrance from Sunley Gardens: <http://tinyurl.com/pgggad>.

This joint event is free to members and their guests but booking is essential – please let David Howdon (david.howdon@virgin.net) know if you plan to attend.

Sunday 27th September:

INSECT SURVEY OF A SURREY GARDEN

Joint event with the Holmesdale Museum Club, Reigate.

Led by Jacqueline Ruffle.

Saturday 17th October:

ANNUAL AES EXHIBITION AND INSECT FAIR

Kempton Park Racecourse, Middlesex

The UK's premier entomological fair.

See pages opposite for details.

NOTE FOR YOUR DIARY: EXHIBITION DATE

SATURDAY 17th OCTOBER 2009

Whether you're young or old, beginner or expert, there is something for everyone who loves bugs at the largest insect extravaganza of the year.

Join us at Kempton Park Racecourse on Saturday 17th October.



- ◆ Over 100 dealers
- ◆ Caterpillars and Butterflies
- ◆ Praying Mantids
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- ◆ Mounted Specimens
- ◆ Leading Insect Artists

Kempton Park is situated under a mile from Junction 1 of the M3. Rail services operate to Sunbury Station, half a mile from the racecourse, from London Waterloo.

For further details contact the AES at:

*PO Box 8774, London SW7 5ZG
or alternatively visit the Society's Website at
www.amentsoc.org*

**AMATEUR ENTOMOLOGISTS' SOCIETY
ANNUAL EXHIBITION AND TRADE FAIR**

Saturday 17th OCTOBER 2009

11.00am - 4.30pm

**Kempton Park Racecourse
Staines Road, Sunbury, Middlesex**

HOW TO GET THERE



BY CAR

From the M25. Exit at Junction 12 (M3) towards Sunbury.
Exit the M3 at Junction 1 and take the A308 sign posted for Kempton Park.
The racecourse is situated one mile on the left hand side.

BY TRAIN

Two services an hour are operated from London Waterloo to Sunbury station by South West Trains. Journey time is approximately 40 minutes.

For more information contact London Travel Information on 020 7222 1234

AES Publications

Amateur Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

£ 11.45

Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988) £ 3.10

Members price £ 2.35

A Coleopterist's Handbook

Edited by J. Cooter & M.V.L. Barclay The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

£ 54.00

Members price £ 39.00

Host plants of British Beetles: A List of Recorded Associations

A list of a wide range of plants, in alphabetical order, together with the beetle species that have been recorded as being associated with them. 24 pages (1992) £ 3.10

Members price £ 2.35

A Silkmoth Rearer's Handbook by B.O.C. Gardiner

SPECIAL OFFER PRICE £ 7.70
No further discounted price available

A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996)

£ 14.20

Members price £ 10.60

Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980)

£ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003)

£ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982)

£ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001)

£ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and describe them. 422 pages. Hardback. (Reprinted 1994).

£ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996)

£ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999)

£ 18.90

Members price £ 14.10

Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition – 2001)

£ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003)

£ 7.40

Members price £ 5.45

The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival.

£ 11.90

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Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951)

£ 1.05

Members price £ 0.90

A Label List of European Butterflies

20 pages. (Revised 1981)

£ 2.35

Members price £ 1.85

Some British Moths Reviewed

Aid to the identification of some of the more difficult species. Reprinted from the *Amateur Entomologist* Vol. 5 (1941) and a *Guide to the Critical Species of Lepidoptera*, reprinted from *Entomologists' Gazette* 1969-72. 64 pages, 6 black and white plates, numerous figures (1985)

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Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000)

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16 pages, 1 plate, 10 figures. (1974)

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Rearing Crickets in the Classroom

12 pages, 2 plates. (1986) (Reprinted 1993)

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Guidelines for Entomological Site Surveys

Published on behalf of the JCCBI. 7 pages (2000) (Reprinted 2003) Members price £ 2.35

The Journal of the Entomological Exchange and Correspondence Club 1935-1936

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collected all-year round, and populations in the Jordan valley have several broods. Butterflies were observed in remote areas as Qasr Burqu' in the eastern desert as well as in the busy streets downtown in Amman. *Pontia edusa* Fabricius is one of the most common species inhabiting almost all parts of Jordan except the southern desert. *Pontia glauconome glauconome* Klug occurs in the southern Jordan Valley, northern and southern deserts of Jordan. It is very scarce. It was collected from March to May. The pupa can diapause for several years. *Zegris eupheme uarda* Hemming is limited to the Irano-Turanian zone separating the Mediterranean vegetation from the lower parts of Jordan Valley. One brood appears from late February to early April. Pittaway (1985) described *Zegris eupheme larseni* from Saudi Arabia and Jordan. One paratype female was collected from Wadi Rum (south Jordan) by Larsen (1977).

Anthocharis cardamines phoenissa Kalchberg occurs in north western part of the northern Mediterranean zone. This species is quite common in Lebanon and Palestine. *Anthocharis gruneri gruneri* Herrich-Schäffer is recorded from Jordan for the first time. This species is now recorded from the northern Mediterranean zone (Larsen & Nakamura, 1983). *Aporia crataegi augustior* Graves is common in the mountainous areas and along the Jordan Valley. Peak activity occurs in April. Larsen (1977) reported on the seasonal fluctuation of this butterfly, and indicated that it becomes very scarce and later reappear in relatively high numbers. *Belenois aurota aurota* Fabricius prefers the warm Jordan Valley, it was collected from two localities within the eastern mountains. *Colotis danae eupompe* Klug is recorded from Jordan for the first time and it is apparently very rare. *Colotis phisadia phisadia* Godart is limited to the Dead Sea area in Jordan, but may have contact with the Arabian populations through Wadi Arabah and Aqaba. It is a tropical element of the Jordanian fauna. *Euchloe ausonia melisande* Fruhstorfer is common in both Mediterranean zones of Jordan. *Euchloe belemia* Esper is a common species in the northern Mediterranean zone of Jordan and known to occur in the Jordan Valley. It has one brood in the spring, with highest peak of emergence in April (Larsen & Nakamura, 1983). *Euchloe charlonia* Donzel is mostly associated with the Irano-Turanian ecozone, with fewer populations occurring in the Jordan Valley. Amr et al. (1997) reported on its rare presence in Al Azraq Reserve. Previous collecting dates suggest up to three broods per year. Ten Hagen (1996) recorded *Euchloe penia* Freyer from Syria. It is possible that this species may occur in north Jordan, however, this needs further investigation. *Madais fausta fausta* Olivier (Salmon Caper butterfly) is a rather migratory species with a distribution confined to the Jordan Valley and the upper Mediterranean zone. Other earlier localities include Zarqa Main and Petra (Larsen & Nakamura, 1983). It seems that it has two broods, one in spring and another towards the end of July. Larsen (1975) suggested that a regular migratory contact with the Arabian populations occurs to ensure the survival of the Jordanian populations.

Systematic list of recorded species

For each species, the abundance, habitat and flight period in which it is found are given. Five terms are used to describe abundance:

Common	(C)	a species usually encountered every day in numbers.
Uncommon	(UC)	a species encountered on most days usually in small Numbers.
Rare	(R)	a species of which few are encountered, and encounters are infrequent during a year.
Extremely rare	(ER)	a species not seen most years with few records for any given location.
Local	(L)	a species known only from restricted localities and habitats.

The descriptions of habitats and elevations are based on observation within the investigated area. Flight seasons are normally fairly constant, although during inclement weather emergence may be delayed by two or three weeks.

Hesperiidae Latreille 1809

1. *Gegenes gambica* Mabille, 1878
Abundance: C; Habitat: Rocky area; Flight period: April- May
2. *Pelopidas thrax thrax* Hübner, 1821
Abundance: UC; Habitat: grassy land; Flight period: mid April-end May
3. *Thymelicus acteon phoenix* Graves, 1925
Abundance: R; Habitat: fields; Flight period: march-May
4. *Carcharodus alceae* Esper, 1780
Abundance: L; Habitat: gravels; Flight period: mid March-May
5. *Pyrgus melotis melotis* Duponchel, 1834
Abundance: UC-R; Habitat: bushy land; Flight period: mid April-June
6. *Spialia doris doris* Walker, 1870
Abundance: ER; Habitat: grassy land; Flight period: May-June
7. *Syrichtus tessellum nomas* Lederer, 1855
Abundance: C; Habitat: forest edges; Flight period: march end-May end

Papilionidae Latreille 1809

8. *Papilio alexanor maccabaeus* Staudinger, 1891
Abundance: UC; Habitat: field; Flight period: May-June
9. *Archon apollinus* Herbst, 1798
Abundance: UC-R; Habitat: clearings; Flight period: April-May

10. *Allancastria deyrollei eisneri* Bernardi, 1971
Abundance: ER; Habitat: field; Flight period: May -July
- Pieridae Duponchel 1832**
11. *Catopsilia florella* Fabricius, 1775
Abundance: L; Habitat: Field; Flight period: June-September
12. *Gonepteryx cleopatra taurica* Staudinger, 1881
Abundance: UC; Habitat: field; Flight period: June-September
13. *Anthocharis cardamines phoenissa* von Kalchberg, 1894
Abundance: R; Habitat: grassy land; Flight period: June-August
14. *Aporia crataegi Augustior* Graves, 1925
Abundance:L; Habitat: grassy springs; Flight period: July-September
15. *Belenois aurota aurota* Fabricius, 1793
Abundance: ER; habitat: grassy springs; Flight period: May-July
16. *Colotis danae eupompe* Klug, 1829
Abundance: C; Habitat: trees and bushes; Flight period: June -July
17. *Euchloe ausonia melisande* Fruhstorfer, 1908
Abundance: UC; Habitat: grassy springs; Flight period: march-September
18. *Madais fausta fausta* Olivier, 1804
Abundance: L; Habitat: rocks; Flight period: May-September
19. *Pieris brassicae* Linneaus, 1758
Abundance: C; Habitat: rocks; Flight period: April-June
20. *Pontia edusa* Fabricius, 1777
Abundance: R; Habitat; Flight period: April-June
21. *Zegris eupheme uarda* Hemming, 1929
Abundance:L; Habitat: rocks; Flight period: April-June
- Nymphalidae Swanison 1827**
22. *Charaxes jasius jasius* Linnaeus 1767
Abundance: ER; Habitat: grassy springs; Flight period: April-June
23. *Danaus chrysippus chrysippus* Linnaeus, 1758
Abundance: R; Habitat: rocks; Flight period: April-June
24. *Junonia orithya here* Lang, 1884
Abundance: UC; Habitat: grassy springs ;Flight period: April-June
25. *Limenitis reducta schiffermuelleri* Higgins, 1933
Abundance: UC; Habitat: rocks; Flight period: April-June

26. *Melitaea trivia syriaca* Rebel, 1905

Abundance: C; Habitat: open forests; Flight period: April-May

27. *Polygona egea* Cramer, 1775

Abundance: R; Habitat: grassy springs; Flight period: June-September

28. *Vanessa atalanta* Linnaeus, 1758

Abundance: ER; Habitat: R; Flight period: June -July

29. *Hipparchia fatua sichaea* Lederer, 1857

Abundance: ER; Habitat: field; Flight period: April-June

30. *Hyponephele lupinus centralis* Riley, 1921

Abundance: UC; Habitat: field; Flight period: April-June

31. *Lasiommata maera orientalis* Heyne, 1894

Abundance: C; Habitat: grasses and herbs; Flight period: June -July

32. *Maniola telmessia* Zeller, 1847

Abundance: C; Habitat: grasses; Flight period: April-June

33. *Melanargia titea titania* Calberla, 1891

Abundance: UC; Habitat: grasses; Flight period: April-June

34. *Ypthima asterope* Klug, 1832

Abundance: ER; Habitat: rocks; Flight period: June-September

Lycaenidae Leach, 1815

35. *Apharitis acamas acamas* Klug, 1834

Abundance: R; Habitat: springs; Flight period: April-May

36. *Lycaena phlaeas timeus* Cramer, 1777

Abundance: fields; Habitat: grassy springs; Flight period: April-June

37. *Anthene amarah amarah* Guerin-Meneville, 1847

Abundance: UC; Habitat: rocks; Flight period: May-July

38. *Aricia agestis agestis* Denis & Schiffermuller, 1775

Abundance:R; Habitat: grassy springs; Flight period: April-June

39. *Azanus jesous* Guérin-Méneville, 1849

Abundance: C; Habitat: grasses; Flight period: April-June

40. *Azanus ubaldus* Cramer, 1782

Abundance: L; Habitat: grassy springs; Flight period: April-June

41. *Chilades galba* Lederer, 1855

Abundance: C; Habitat:; Flight period: May-July

42. *Iolana alfierii* Wiltshire, 1948

Abundance: UC; Habitat: on brassicaceae species like *Brassica*; Flight period: April-June

43. *Lampides boeticus* Linnaeus, 1767

Abundance: C; Habitat: grassy springs; Flight period:

44. *Plebejus pylaon cleopatra* Hemming, 1934

Abundance: C; Habitat: on *Astragalus* spp. (Fabaceae); Flight period: June-September

45. *Plebejus pylaon nichollae* Elwes, 1901

Abundance: UC; Habitat: on grasses and small annual herbs; Flight period: May-June

46. *Pseudophilotes abencerragus nabataeus* Graves, 1925

Abundance: R; Habitat: grassy springs; Flight period: May-July

47. *Tarucus rosaceus* Austaut, 1885

Abundance: L; Habitat: on *Ziziphus spina christi*; Flight period: May -July

48. *Zizeeria karsandra karsandra* Moore, 1865

Abundance: L; Habitat: on several Fabaceae species; Flight period: May-August.

49. *Iolaus glaucus* Butler, 1885

Abundance: L; Habitat: on the *Loranthus* sp., a parasitic plant on several trees especially *Acacia* trees; Flight period: May-July

50. *Tomares nesimachus* Oberthur, 1893

Abundance: L; Habitat: on the parasitic plant *Visum cruciatum* on olive trees; Flight period: April-July

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ARMYWORMS (DIPTERA: SCIARIDAE) AT KILMELFORD, ARGYLL, IN 2008

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Abstract

Two small areas of coniferous woodland near Oban in west Scotland are the only places in the British Isles where marching columns of larvae of *Sciara militaris* Nowicki (Diptera: Sciaridae) ('armyworms') have been recorded. In 2008 they appeared at one of these sites, Kilmelford, for a third successive year. Numbers of columns were much higher than before: the highest number seen on a single visit was 140 columns with an estimated total of one to two million larvae (six or seven times the previous highest count). Four columns were seen to last for at least three hours, but some had shorter lifetimes. Moving columns were seen turning into immobile patches, and *vice versa*, with little mixing between columns. This implied that any one column would tend to contain the same individual larvae day after day, explaining a previous observation that larval size varied markedly between columns. Usually columns greatly outnumbered patches but, on a day of heavy rain, numbers of columns and patches were roughly equal and many patches appeared to be sheltering from the rain.

Keywords: *Sciara militaris*, larvae, Scotland

Introduction

The extraordinary marching columns of closely aggregated larvae of *Sciara militaris* (Diptera: Sciaridae) were first recorded in the British Isles at a site at Barcaldine, near Oban in west Scotland, in July 2004. Much larger numbers, both of columns and of larvae, were seen there in 2005, but only two columns appeared in 2006 and none in 2007 or 2008. However in 2006 and again in 2007 columns appeared at a site 29 km to the south-south-west, near the village of Kilmelford (Craik et al. 2007). These are believed to be the only two sites in the British Isles where this species and its remarkable columns of larvae ("armyworms") have been seen. Records of both are widespread but uncommon in continental Europe, particularly in Germany, Finland, Sweden, Poland and Norway (Menzel & Mohrig 2000; Craik et al. 2005).

In 2008 columns again appeared at Kilmelford. Their numbers were much higher than they had been before at either site. The highest count on a single visit was 140 columns on 26 July. For comparison, the highest number at Barcaldine was 22 columns on 23 July 2005. This article records the events at Kilmelford in 2008, including some aspects of armyworm biology that may not have been described before.

Observations

Species

Sciarid species must usually be identified by examination of the adults rather than the larvae. In July-August 2008 larvae from Kilmelford were reared in captivity by the method used at Barcaldine in 2004 and 2005 (Craik *et al.* 2005). As usual with this and related sciarid species, many more females emerged than males (20 females and two males). Nevertheless, from the two males it was confirmed by Jane Smith that the species was *S. militaris* Nowicki, 1868, the same species that appeared at Barcaldine. Presumably the larvae at the Kilmelford site in 2006 and 2007 must also have been this species, although no identifications were made in those years.

Description of site

At both Barcaldine and Kilmelford, larval columns appeared in commercial coniferous forest consisting mainly of sitka spruce *Picea sitchensis* with smaller numbers of Norway spruce *P. abies*. The trees at Barcaldine are believed to have been planted in 1979-80 and those at Kilmelford in 1974-75 (Craik *et al.* 2007).

At Barcaldine, the larval columns were confined to a stretch of about 40 metres of a footpath running through the forest, none appearing more than about seven metres on either side of the path. Likewise, at Kilmelford in 2006 and 2007 the larvae were almost all seen on a 30-metre stretch of unmetalled forestry track. In 2008 this changed remarkably. The first few columns to appear (one on 21 July, one on 22 July and one on 23 July) were on the same stretch of track as in the two previous years. Thereafter, however, almost all the columns found were spread over a much larger area inside the forest itself, bounded to the east by the same stretch of track, and to the west and north by a stream. This area was divided naturally into an upper part (ca 50 x 40m) and lower part (ca 30 x 50m). The upper part held 20-25 rows of trees (some rows shorter than others) with 20-23 trees per row. The lower part held 12-14 rows with 28 trees per row. Most rows were ca 2 m apart, as were trees within the rows. The ground in each part was almost unbrokenly shaded by the trees and consisted of brown needle (litter) layer with little or no green vegetation. The upper and lower parts were separated by an intervening raised area of ca 15 x 15m with few trees, receiving more sunlight and therefore with much green vegetation. No columns were found here.

Within each of the two parts there were *hotspots*, areas where day after day columns were found concentrated in groups. There were about four or five hotspots in each part, each hotspot being typically about 10 x 10 m and holding 5-8 columns. Smaller numbers of columns occurred singly or in groups of two or three together, but some areas held no columns, particularly closer to the track.

Most columns were found in drainage ditches between the tree rows, on the sloping ditch sides, and at the tree bases on the ridges between the ditches. On several occasions columns were seen climbing tree trunks to heights of 10-30 cm. Generally, columns seemed to favour moist areas and to avoid dry ground.

Despite regular searching, no columns were seen on the other side of the stream, where there was a commercial plantation of fir *Abies* sp., or on the other side of the track, where there was more Sitka spruce; however, both these areas were entered and searched less frequently than the two parts with the main concentrations of columns, once these had been discovered. Possibly the stream and the track, neither more than about five metres wide, had formed natural barriers to the weakly-flying adults during egg-laying in 2007.

Numbers of columns

The maximum count on a single visit was on 26 July, when 140 columns with an estimated total of one to two million larvae were present. This followed rain on the night of 25-26 July after a relatively dry spell. The columns were noticeably more widespread on 26 July, as there was little dry ground to avoid. This maximum was certainly many more than had been seen there in 2006 or 2007 (although exact counts were not made in those years). Other counts are given in Table 1. Although it was not established as a hard-and-fast rule, in general it seemed that more columns were seen about midday than in the early morning or later. For example, on 26 July at about 0800h there were 64 columns (42 in lower part, 22 in upper); at about 1300h there were 140 (73 lower, 67 upper). At 1700h, when only the lower part was counted, there were 36 or about half the count made there four hours earlier.

Columns and Patches

Unlike Barcaldine, the forest at Kilmelford had been thinned by removal of entire trees here and there, some alternately within the rows; also, many lower branches had been removed. The layer of needles on the ground was noticeably less deep than at Barcaldine and the resting, non-marching groups of larvae could not bury themselves so easily in the needle layer and so could be seen. At Barcaldine the needle layer was so deep that these were rarely or never seen. Each resting group appeared as an irregular or roughly round or oval "patch" of immobile or weakly moving larvae. As a result of this visibility of patches of resting larvae, it was seen that moving columns sometimes stopped moving forward and became immobile patches of larvae. Separately, patches were seen to become active and form moving columns.

Larvae in patches seemed inactive with no suggestion of the highly organised behaviour seen in columns, such as the urgent directed motion, the intense attachment to the moving group (Plate 29), or the wave-like patterns of locally synchronised longitudinal contraction and relaxation. Possibly they were resting or moulting, as Sciarid larvae moult four times between egg and pupal stages. In particular, larvae in patches did not appear to be feeding, suggesting that feeding is more likely to occur in the moving columns. This idea was tested by looking for increases in dry mass of larvae moving in columns. Small but detectable increases were found, supporting the idea that feeding is one function of marching columns of sciarid larvae. These results will be published separately.

Table 1. Dates and Numbers of Armyworm Columns at Kilmelford in 2008

Date	Time (nearest hour)	Number of Columns	Part of Forest that was counted (see text)
21 July	8	1	Track
22 July	7	1	Track
23 July	9 and 10	1	Track
	17	56	Lower part
24 July	14	20	Lower part
	18	4	Lower part
25 July	8	8	Upper part
	12	7	Upper part
	16	0	Upper part
	20	0	Upper part
26 July	8	64	42 lower, 22 upper
	13	140	73 lower, 67 upper
	17	36	Lower
27 July	13	48	Lower and upper
28 July	9	57	Lower and upper
	21	37	35 in forest, 2 on track
29 July	19	11	10 in forest, 1 on track
30 July	12	27	25 in forest, 2 on track
31 July	16	54	31 lower, 23 upper
1 August	11	57	Lower: incl. many patches; see text
	13	72	Lower: incl. many patches
2 August	17	29	Lower and upper
3 August	9	58	21 lower, 37 upper
4 August	14	10	5 lower, 5 upper
5 August	9	12	Lower
	13	0	Lower and upper
6 August	13	18	3 columns, rest patches; lower and upper
7 to 11 Aug		None	

On one occasion a moving column was seen to move across a patch of inactive larvae. The larvae in the patch all remained inactive. Not one was seen to reactivate and join the moving column. This suggests that there is no pheromone (external hormone) that triggers activity and column formation. Possibly column formation is induced by some internal factor, such as hunger.

Previously, at Barcaldine, it had been asked 'Do columns all mix up in the soil/litter layer/soil when they disappear (for example overnight), and form columns anew when they reappear (perhaps next day)? Or do individual columns retain their identity?' From the above observations, it seems much more likely that the latter is true; a column turns into a patch (which possibly persists overnight) and back into a column again, retaining its identity as a group of

larvae. Even allowing for some mixing when columns touch or partly merge, a column might still hold broadly the same individual larvae day after day. This would concur with the finding that columns differed markedly in larval size (Craik 2007).

Lifetime of a column

Some columns were seen in the act of forming (coming out of the ground/needle layer, or forming from a patch) and others were seen in act of dispersing into resting masses or disappearing into the ground. Attempts were made to follow several columns from formation to dispersal and thus establish their lifetimes. These were mostly unsuccessful, partly because few were seen at the moment of formation, partly because such observations needed more time than was available, and partly because many columns were small and, since they move at two cm/min (Craik *et al.* 2006), they can be difficult to relocate after an observer has been away recording other columns. Times during which individual columns were tracked were therefore minimum estimates of column lifetime. Of six tracked for three hours, four persisted as moving columns throughout the three hours, while two formed immobile patches shortly before three hours had elapsed. Several were tracked for one to two hours, but most were kept in view only for shorter periods. We may conclude that some columns persist for at least three hours.

Effect of heavy rain

Patches became particularly obvious on 1 August, during a day of frequent heavy rain when many more patches formed than usual. At the first count of 57 groups (columns C and patches P), there were 28C, 23P, 3P turning to C, 2C turning to P, and 1 marching ring). Several of the patches were seen apparently sheltering from the rain, in cavities under tree roots or in ditches under small projections of earthy substrate. One patch, unusually, was seen *moving* to take shelter under a paper label. During another downpour the same day, one large patch was found underwater in a pool in a drainage ditch. Within an hour, it had formed itself into a column and moved out of the water onto drier ground.

Miscellaneous observations

Small amounts of flour placed in front of a column (so that the leading larvae moved over it) did not cause a change in behaviour or direction. They passed over it without eating it and with no apparent interest. The same was true of Bovril (dry gravy solids).

As at Barcaldine, large, often linear deposits of frass were found in areas that columns had passed through. Also as at Barcaldine, two marching rings were found (Plate 30), one that lasted at least from 1335 h on 26 July to 1400h on 27 July, even though the ring was deliberately broken and a stick placed across the break at c 1500 h on 26 July; the ring reformed and continued for at least another 23 h. Although column lengths at Kilmelford were not measured with measuring

tape, one column there on 28 July was estimated by pacing to be five m long, longer than the longest measured at Barcaldine (3.98 m; Craik *et al.* 2006).

A striking phenomenon, not seen in earlier years, was a vertical "rope" of larvae descending a precipitous fall of c 40 cm (Plate 31). Larvae in the rope had no support other than the larvae attached below, above and around them. After the descent, they briefly resumed normal column behaviour before disappearing into a hole in the ground.

At night, larvae in a column reacted to torchlight by becoming disorientated and moving in random directions rather than all in one direction.

If sharply blown upon by mouth, all or most larvae in a column gave a sudden synchronised jerk of the front part of their bodies away from the stimulus before briefly stopping their forward movement. This response weakened progressively when blowing was repeated several times. The initial response was much weaker if they were fanned with hand or notebook, probably because of the different nature of the air movement.

On 4 August, a small (2 cm) frog *Rana temporaria* found nearby was placed in the middle of a column but did not pay any attention to the larvae or attempt to eat them, and after five minutes it hopped away. On another occasion, a small toad *Bufo bufo* was placed on a moving column. It remained there unmoving for about three minutes and similarly showed no interest in the larvae as food. When it apparently could no longer tolerate them crawling on its lower body and limbs, it repeatedly moved its hind legs in evident annoyance and eventually walked away. The larvae did not adhere to either of these amphibians.

Acknowledgements

We are grateful to Jane Smith (Warwick HRI, Wellesbourne, Warwick) for confirming the identity of the adults.

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Plate 29. Armyworm. Marching column of larvae of *Sciara militaris*.



Plate 30. Armyworm. Marching ring of larvae.



Plate 31. Armyworm. Descending rope of larvae.

New pyraloid moth records from Rum National Nature Reserve

From 30 July to 8 August 2008 I was on the island of Rum, a National Nature Reserve in the Inner Hebrides of western Scotland. The reserve is managed by Scottish Natural Heritage (SNH) and, at least compared with much of western and northern Scotland, has been relatively well-studied for insects, especially Lepidoptera (see, for a recent summary, *Glasgow Naturalist*, 2006, **24**: 125-153). My visit was as part of a Macaulay Institute botanical survey team carrying out work on a contract to SNH. However I managed some opportunistic mothing and ran a single 15 watt actinic Skinner trap each night. Of the species recorded, the

following four pyralid moths are all new to the island (per Jessie Mackay, Lepidoptera recorder for 'The Small Isles') and indeed to North Ebudes, Vice County 104 (per Tony Davis, Pyralid and Plume Recording Scheme).

- *Eudonia pallida* (Curtis): three in the moth trap at Kinloch on 31 July.
- *Dipleurina lacustrata* (Panzer): total of five caught on 31 July and 1 and 2 August at Kinloch.
- *Evergestis pallidata* (Hufn.): one found dead on 2 August by rifling through insects killed by the UV fly zapper in the hostel kitchen.
- *Pleuroptya ruralis* (Scop.) (Mother of Pearl): one caught on 6 August at Kinloch.

The record of *E. pallidata* is the most noteworthy of these, this species having been recorded previously in just four Scottish vice-counties. It also further underlines the value of recording the contents of these kitchen insect electrocuters following Keith Alexander's note about species recorded by such a method at a tea servery in Norfolk (2008, *Ent. Rec.* 120: 147-149). It is unlikely that this distinctive moth and *P. ruralis* would have been overlooked in the past and they seem more likely to be either wanderers or recent colonists. Whilst *E. pallida* and *D. lacustrata* may have been overlooked it is tempting, given the history of recording at the site, to suggest that these too are likely to be recent arrivals.— NICK A. LITTLEWOOD, Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH. (E-mail: n.littlewood@macaulay.ac.uk).

Very late-flying Beautiful Snout *Hypena crassalis* (Fabr.) (Lep.: Noctuidae) from a Rothamsted Light Trap

Recent examination of stored samples from the Rothamsted light-trap at Yarner Wood in Devon (site 589: O. S. grid reference SX 786789) produced a specimen of *H. crassalis* caught during the period 10-12 November 2007. This univoltine species is normally on the wing from late May to early August, depending upon altitude (Waring, P., Townsend, M. & Lewington, R. 2003. *Field Guide to the Moths of Great Britain & Ireland*. British Wildlife Publishing), so this individual was flying three months late.

Many thanks to Albert Knott and other Natural England staff at Yarner Wood for their hard work operating the light trap.— PHILIP J. L. GOULD, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ (E-mail: phil.gould@bbsrc.ac.uk).

FURTHER ABERRATIONS OF THE AFRICAN CLOUDED YELLOW *COLIAS ELECTO* L. (LEP.: PIERIDAE) FROM THE WESTERN CAPE, SOUTH AFRICA

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Abstract

Four aberrations of *Colias electo electo* L. (Lepidoptera: Pieridae) are described from the South Western Cape of South Africa.

Keywords: *Colias electo*, Pieridae, aberrations, Africa, Western Cape

Introduction

The aberrations here described are mainly concerned with wing patterns and ground colour and are not associated with the scale deformation, malorientation and pigment deficiency of ab. *capensis*, ab. *memorabilis*, ab. *inconstantius* and ab. *pallidula* (McLeod & MacLeod; 2002, McLeod, 2004). Only single specimens were taken of each and no other individuals of these aberrations were seen in the population. They are, therefore, of lesser interest than ab. *capensis* which, in early 2004, still maintained a good presence in the population under study, some 16 years after its discovery. The main centre of the population of *C. electo* in which

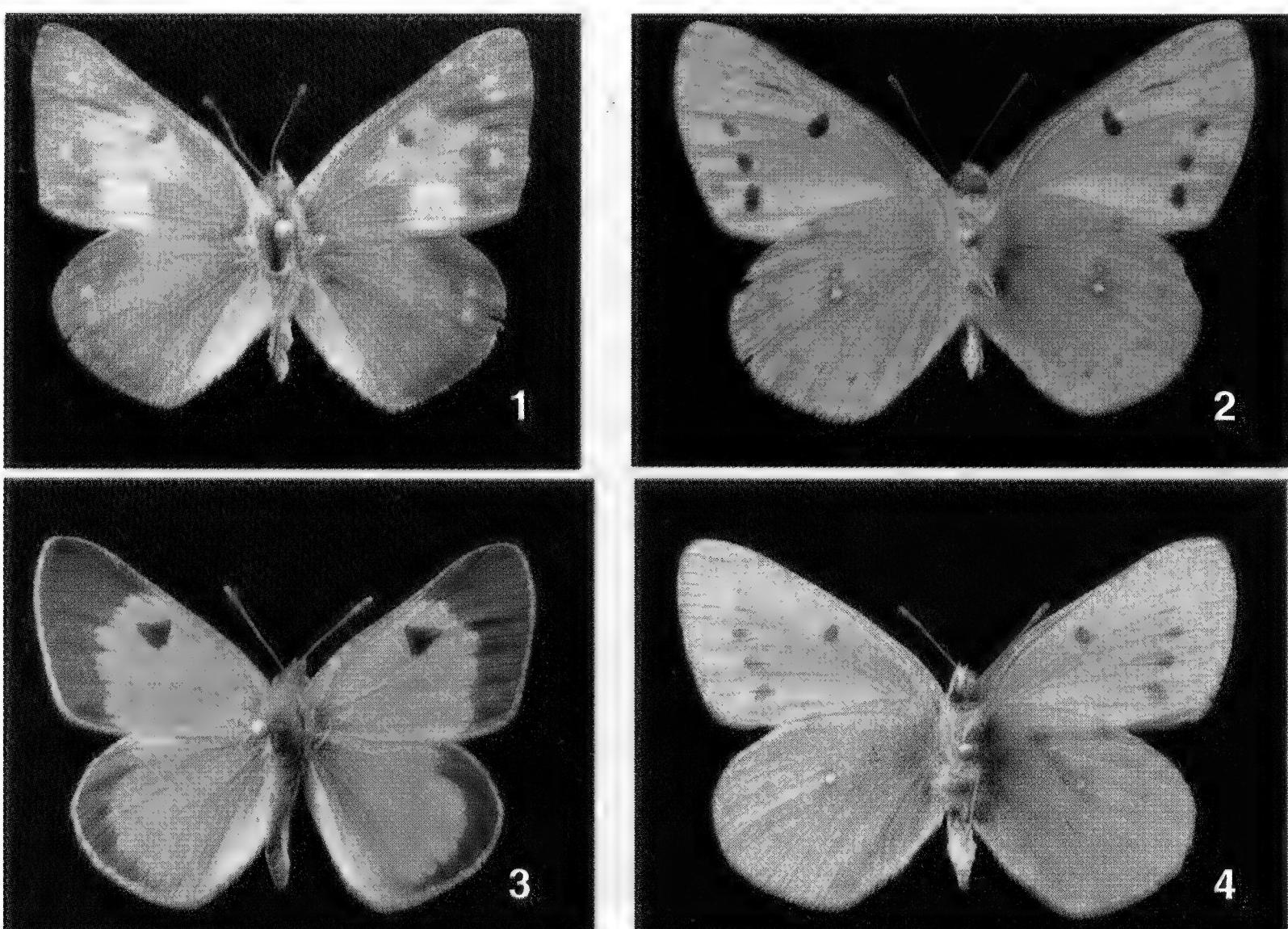


Plate 32: Fig. 1. *Colias electo electo* (L.) ab. *meritateneae* ab.nov. Upperside. **Fig. 2.** *Colias electo electo* (L.) ab. *infra striata* ab.nov. Underside. **Fig. 3.** *Colias electo electo* (L.) ab. *elongata* ab.nov. Upperside. **Fig. 4.** *Colias electo electo* (L.) ab. *postfulvescens* ab.nov. Underside.

ab. capensis maintained a high percentage, was unfortunately ploughed and planted by a farmer in 2005. Since then, no aberrations have been seen. Hopefully, *ab. capensis* may reappear.

Colias electo electo ab. meritatene ab. nov.

Holotype Female. Riviersonderend, Cape, S.Africa 15.xi.1993, L. McLeod. Plate 32, Fig. 1.

In this phenotype, the characters typifying the aberration concern only the DFW (Dorsal Forewing). The DHW and the VFW & VHW remain as in the typical female form.

The basal areas of the DFWs are strongly orange with a tendency towards gingery-brown. This is caused by a mixture of orange and black pigmentation of the scales. The typical female has basal areas which are black. Distally situated to the orange basal areas in the discal and postdiscal regions of 1a and 1b of both forewings are areas lacking pigment.²⁰ The remainder of the forewing ground colour ie. in cellules 2,3,4,5 and 6, plus the distal portion of the cell, the orange pigment is greatly reduced. This area of reduced orange pigmentation surrounds the dark discal spot.

Colias electo electo ab. infrastriata ab. nov.

Holotype Male. Riviersonderend, Cape, S.Africa. 21.xi.1993, L. McLeod. Plate 32, Fig. 2.

In the females of *C. e. electo* there is often a tendency for the discal spot of the VFW to be joined with the dark post-discal spots by means of one or more connecting bars. (*ab. nigrofasciata*). This can be seen in the photograph of *C. e. e. f. aurivilliusi ab. capensis* figured in McLeod & MacLeod (2002). This tendency is usually absent in males.

In this male there is a very prominent bar situated between the discal spot of the VFW and the dark post-discal spot in cell 5, however, this bar remains totally separate and does not connect to the discal spot nor the post-discal spot. When viewed at high magnification the scales forming this bar are seen to be raised up from the surface. A very similar example is seen in a female *C. e. hecate* from Malawi, collected by R. J. Murphy in the Misitu Forest, Dzalanyama Range (in the collection of L. McLeod).

This aberration was described from *C. hyale* L. as *ab. infrastrigata* by Lempke (1954). '*On the underside of the forewings in cell 5, a black horizontal line between the discal spot and dark submarginal spot, but reaching neither of them.*'

Colias electo electo ab. elongata. ab. nov.

Holotype Male. Riviersonderend, Cape, S.Africa, 23.xii.1989. L. McLeod. Plate 32, Fig. 3.

In this phenotype the post-discal spot of the DFW is enlarged to double its normal size and is elongated to a point on its outer side, thus resulting in a triangular

shape. The red UV flash of the DFW and DHW is particularly evident in the single specimen, but this very prominent red flash can sometimes be seen in normal individuals. The accompanying photograph (Plate 32) shows how the UV flash can change the apparent colour of the wing surfaces when viewed from different angles.

This aberration also occurs in other species of the genus *Colias*, and has previously been described⁼² from *C. hyale* L. as *ab. elongata* Vorbrot and *ab. goricana* Fritsch.

Colias electo electo ab. postfulvescens ab.nov

Holotype Female. Riviersonderend, 15.xi.1990. L.McLeod. Plate 32, Fig. 4.

In the Western Cape, the groundcolour of female VHW shows a range of variation, particularly in the depth of green, which can be strong to absent. In this phenotype, the major distinguishing character concerns the VHWs which are brown instead of the yellow of the typical form.

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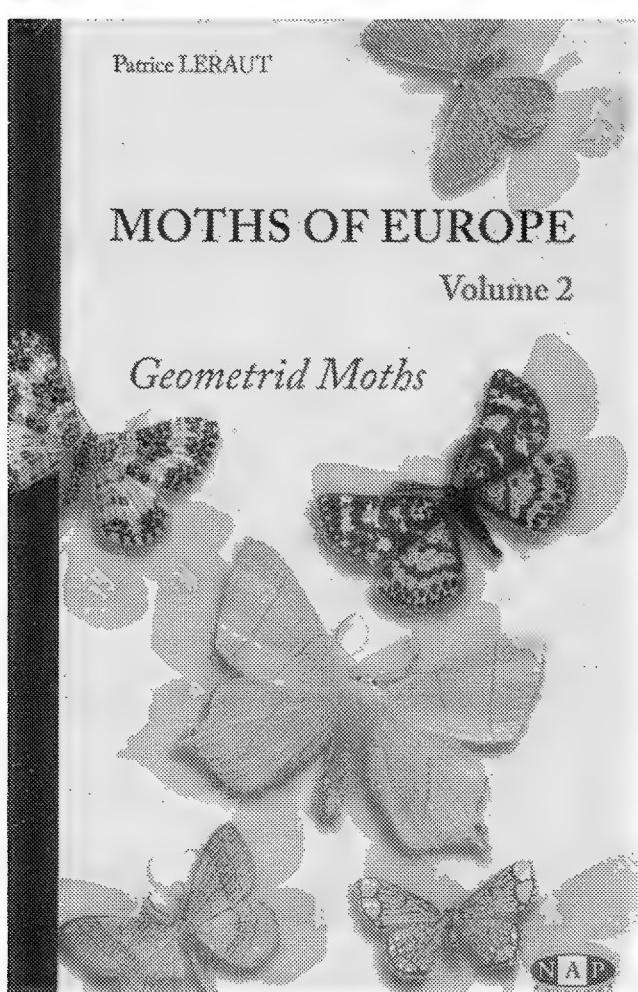
BOOK REVIEW

Moths of Europe, volume 2: Geometrid Moths by P. Leraut. 804pp, 158 colour plates, numerous line drawings and distribution maps. English text. ISBN 978-2-913688-09-4. N.A.P. Editions, 2009. Order direct from www.napeditions.com or phone 00 33 160 13 59 52, €72 incl. p.& p. Also available in the UK for £77 + £5 p.& p. from most booksellers.

Volume 1 of this series by Patrice Leraut, on Saturniidae, Lemoniidae, Brahmaeidae, Endromidae, Notodontidae, Lasiocampidae, Drepanidae, Lymantriidae, Limacodidae, Cossidae, Sphingidae, Hepialidae and Arctiidae, was published in 2006. Now we have an up-to-date account of the Geometridae by the same author.

Like the first volume, this is presented in the standard format of a pocket-sized field guide, and as one which assumes that the relative beginner is intelligent and endowed with a desire, not only to tick off a species which is new to him, but to learn more, much more, about the Lepidoptera as a whole. No dumbing down here, but understandably in a pocket guide, nothing about the phylogeny of the Geometridae.

The lengthy Introduction deals with the general features of Lepidoptera with particular reference to the Geometridae. The choice of *Abraxas grossulariata* to illustrate the "typical" wing pattern is a little unfortunate in that the usual crosslines and stigmata are less obvious here than in, say, *Selenia tetralunaria*. An outline of the characteristics of the different subfamilies of Geometridae is given. This is followed by a section on the ecology in which



variation. Unlike many authors, who correctly regard varietal names as having no taxonomic status, Leraut invokes these names as useful labels for distinctive forms, for example under the first species, *Archiearis parthenias*, he cites f. *obscura* Prout, f. *nigra* Tutt, f. *variegata* Lempke, and no less than seven other named forms. Your reviewer heartily applauds this approach. Similar species are briefly compared, when appropriate with reference to their genitalia, all clearly illustrated with line drawings. Next come references to Bionomics, including flight times, Distribution and Status. Most of the species are given an inset Distribution Map. The 158 pages of colour illustrations are sandwiched in the middle of the book.

A British reviewer has to remember that we inhabit a cluster of depauperate offshore islands in north-west Europe and an overview of the whole Continent, as undertaken so admirably by Leraut, might cause eyebrows to be raised in Outre Manche. For instance, no mention is made of the taxon *concinnata* Stephens, and its relationship with *Dysstroma truncata*, nor of *bistortata* Goeze by name, here sunk without trace under *Ectropis crepuscularia* with the comment, "two species of these moths have often been distinguished....." Mironov (2003) dismisses the taxon *jasioneata* Crewe as a mere synonym of *Eupithecia denotata*, and Leraut does not mention it at all, whereas in fact it is very different from *E. denotata* in facies, ecology and distribution, and seems to this reviewer as good a subspecies as one can get, well on the way to speciation. By and large, however, recent arrivals in Britain have been noticed, and local races such as *Alcis repandata* subsp. *sodorensium* and *muraria* recognised.

The accurate distribution of a species shown on a small scale map is fraught with difficulties. The very localised populations in Britain of species such as *Thalera fimbrialis*, *Siona lineata*, *Idaea dilutaria* and *Scopula rubiginata* are shown very well, but it is implied that *Macaria carbonaria*, *Epione vespertaria*, *Ennomos autumnaria*, *Xanthorhoe biriviata*, *X. decoloraria*, *Epirrhoë tristata*, *Costaconvexa polygrammata*, *Entephria flavicinctata*, *E. caesiata*, *Thera cognata*, *T. cupressata*, *Eustroma reticulata* and others occur throughout mainland Britain, which they do not. *Colostygia aptata* is unknown in Britain, but the map shows it as occurring throughout. The map for *Glacies coracina* shows it as absent from Scotland and Scandinavia although it is given as present in the text, and that for *Macaria brunneata* fails to distinguish the resident Scottish population from the occasional immigrants that arrive in southern Britain.

various habitats are described, with some of their more characteristic geometrid inhabitants. Next there comes an account of how specimens can be collected, prepared and stored, in which the necessity of making a collection is explained, and the need for voucher specimens, together with an exhortation to collect and kill the minimum required, advice that should appeal to all. The standard continental technique of operating a light against a vertical sheet, called here a moth trap, is illustrated, but no mention is made of the Robinson, Heath or Skinner traps, so familiar to British collectors. Importantly, the reader is shown how to make preparations of genitalia; their value in accurately identifying some species is stressed, and first class drawings of male and female genital structure are provided for reference.

There follow over 760 pages of species accounts, each consisting of a description of the imago, which includes reference to any superficial sexual differences and, when appropriate, to the range of

The British lepidopterist abroad will quickly familiarise himself with many of the European Geometridae from literature already available, but will have been stumped by groups such as *Nychiodes* spp., *Tephronia* spp., *Glacies* spp. and the many *Gnophos* sensu lato. Here, Leraut is extremely helpful with excellent line drawings of male and female genitalia and wing pattern, in addition to the colour illustrations. Other difficult genera, *Idaea* and *Scopula*, have already been covered in the scholarly **Geometrid Moths of Europe** series, edited by Axel Hausmann, and are dealt with less exhaustively here.

The great majority of Geometridae known to occur in Europe are illustrated in colour. In general, the plates are of fine quality even though some appear rather pallid. There is a problem in that not all species are depicted natural size – some are enlarged, some reduced – and we have to refer to the wingspan given in the caption and try to compute in our minds this important “jizz” factor. This will take some getting used to, but should not cause serious headaches. We are becoming accustomed to calling the Blood-vein *Timandra comae*, but it would have been useful to see an illustration of the Scandinavian *T. griseata*, briefly described on p. 786. The distinctive-looking Spanish *Aplocera bohatschi* is mentioned on p. 721, as being similar to *A. numidaria* from Turkey, but only the latter is illustrated. It is pleasing to see so many forms illustrated (and named), and a rather endearing quirk of the author to illustrate several non-European species including *Tanaorhinus viridiluteata* Walker (Pl.5, fig. 4), from northern India, “just for pleasure” and *Aethalura nanaria* (Staudinger) (Pl.49, fig. 12), from Amur region, “for information”.

I am not sure whether what is essentially a field guide is the place for the description of new taxa. Be that as it may, Leraut has described four new genera here, *Harrisonides* for the taxa *alpina* Sulzer, *graecaria* Staudinger and *florentina* Stefanelli, previously in *Lycia* Hübner, *Kresnaia* for *beschkovi* Ganev), which has hitherto rested uneasily in *Agriopsis* Hübner, *Gerinia* for *honoraria* (D. & S.), removed from *Campaea* Lamarck and *Ifrania* for the North African *michaellarius* Rungs, clearly segregated from *Bupalus* Leach, seven new species, *Comibaena levequei* (Algeria), *Isturgia tozeurensis* (Morocco), *Nychiodes cuencensis* (Spain, Castile), *Tephronia melloulica* (Morocco), *T. gerini* (Morocco, and possibly in Spain), *Charissa herbuloti* (Pyrenees) and *Menophra tameliltensis* (Morocco), and seventeen subspecies.

The sequence of species conforms to that given in Karsholt & Razowski, 1996, hence differing from that in Skinner, 2009, who rightly keeps to the sequence used in his first edition (1984). However, there are quite a lot of name changes consequent upon recent research. English and French colloquial names are given for most species, but the serious student will surely find these superfluous.

All the above remarks should be taken as comments, not criticisms. This book is an important contribution to our knowledge of this interesting group of Lepidoptera, and should be a powerful stimulus towards further study by beginners as well as experienced lepidopterists. It will be of considerable interest to the purely British entomologist and an essential companion for anyone who goes mothting in mainland Europe, even though the price may seem a bit steep.

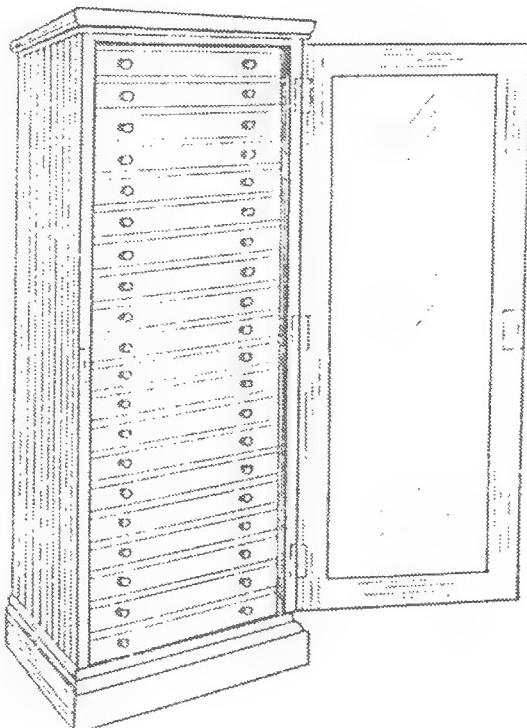
Barry Goater

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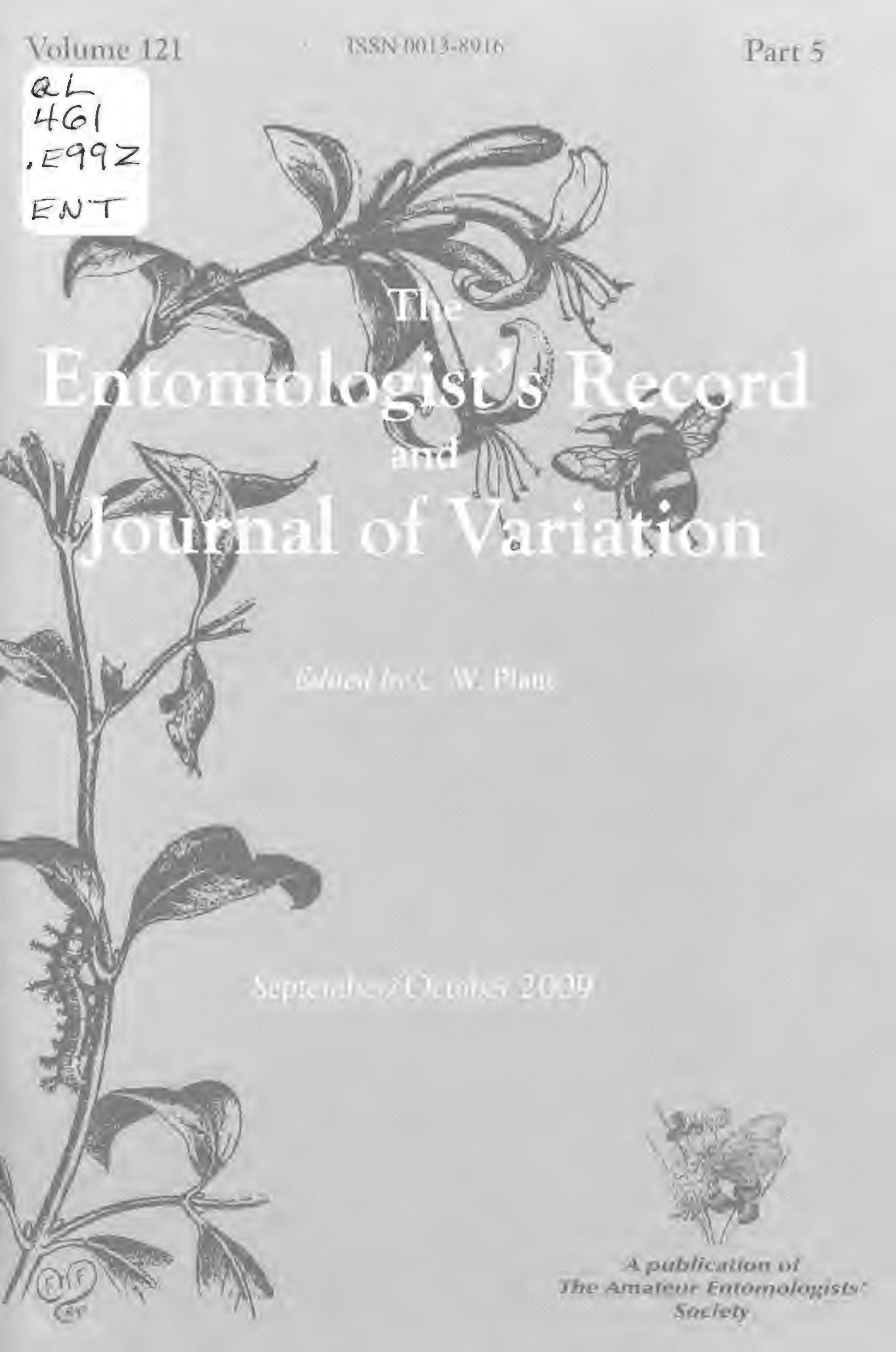
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Suffolk records of *Trifurcula squamatella* Stainton (Lep: Nepticulidae)

On 28 August 2008, SG took a small moth which he couldn't name at m.v. light in his Martlesham Heath (O. S. grid reference TM 37446, VC 25) garden. This was subsequently passed to JC for identification. On examination of the genitalia this proved to be a male *Trifurcula squamatella* (Stainton), a Nepticulid species not previously recorded with certainty in Suffolk, and with only three previously confirmed records in Britain (the last being in 1849).

JC circulated details of the record which prompted JBH to revisit two identical *Trifurcula* specimens taken at light in his Rushmere St. Andrew (TM 209438, VC25) garden, just 6km from Martlesham Heath and initially identified tentatively as the more widespread *T. immundella* (Zeller, 1839). One of these specimens was dissected by JBH and on examination proved to be another male *squamatella*. Both of the Rushmere St. Andrew specimens were taken at m.v. light on 4 August 2008 and pre-date the Martlesham Heath record by two weeks.

T. squamatella was originally described as a distinct species by Stainton (1849. *An attempt at a systematic catalogue of the British Tineidae & Pterophoridae*. London), though subsequently this was regarded as a synonym of *immundella* by many authors. More recently van Nieukerken (1987. Taxonomy and distribution of *Trifurcula squamatella* Stainton sp. Rev., a senior synonym of *T. maxima* Klimesch (Lepidoptera: Nepticulidae). *Entomologist's Gazette* 38: 179-187) re-described *squamatella* as a valid species. The differences in the genitalia between the *Trifurcula* species, including *squamatella*, are well illustrated by (e.g.) Laštůvka & Laštůvka (1997. *Nepticulidae Mitteleuropas: ein illustrierter Begleiter*. Konvoj). Separation of *squamatella* from other members of the genus is fairly straightforward based on the male genitalia (Fig. 1), with this species showing a rounded apex to the gnathos, and the valva being long, narrow and extended, curving inwards at almost a 90 degree angle, and a slightly longer uncus.

The following are the known British specimens to date:

- Bristol, Avon. Before 1899 (Sircom) (Tutt, 1899);
- Location unknown (London?), before 1899 (Bedell);
- Charlton, London, 1♂, 9.viii.1849 (Stainton);
- Charlton, London, 1♂, 1♀, 20.viii.1849 (Stainton);
- Rushmere St. Andrew, Suffolk, 2. 4.viii.2008 (J. B. Higgott);
- Martlesham Heath, Suffolk, 1♂, 28.viii.2008 (S. Goddard);

The Charlton specimens are in the Stainton collection at BMNH and were examined by van Nieukerken, but Sircom and Bedell's specimens (from which the species was described by Stainton) appear to have been lost following auctioning of the collections. An additional British record from Southampton 1935 which referenced by van Nieukerken (loc cit.) was subsequently reidentified as *T. beirnei* Puplesis (J. R. Langmaid pers. comm.).



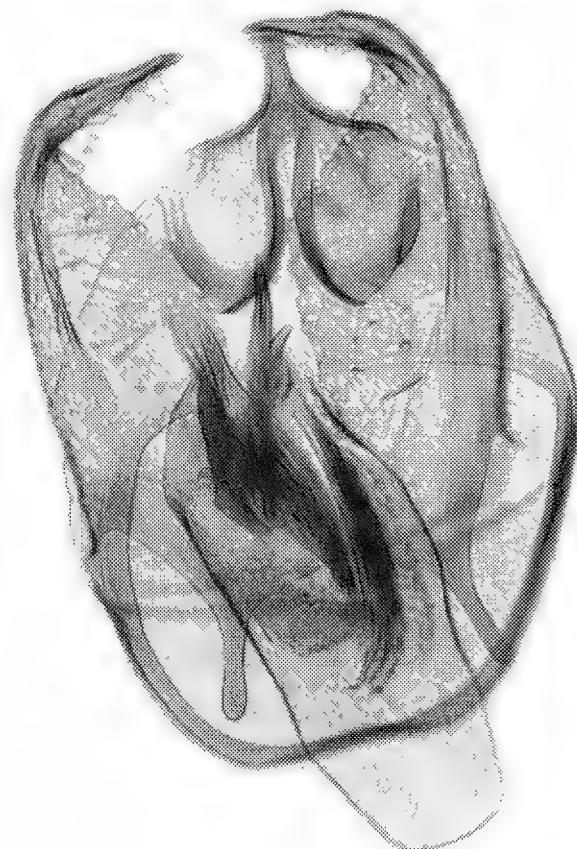


Figure 1. Male genitalia of *Trifurcula squamatella* Stt. Martlesham Heath, 28.viii.2008. S. Goddard (gen. prep. & photo, J. Clifton)

The immature stages of *squamatella* are unknown but its host-plant is believed (as with *T. immundella*) to be *Cytisus scoparius*. Based on the 2008 specimens it is likely that *T. squamatella* is resident at low density in south-east Suffolk, and it is hoped that further work in the heathland habitats in August and September may turn up further records.— JEFF B. HIGGOTT, 42 Valleyview Drive, Rushmere St. Andrew, Suffolk IP4 5UW; JON CLIFTON, Kestrel Cottage, Station Road, Hindolveston, Norfolk NR20 5DE; STEVE GODDARD, 64 Heathfield, Martlesham Heath Suffolk IP5 3UB.

***Subilla confinis* (Stephens) (Raphidioptera: Raphidiidae) from a cherry orchard in Herefordshire**

A single specimen of *Subilla confinis* was taken in a flight trap operated at about 1.5m above ground level against the trunk of a large old cherry tree in the centre of a large cherry orchard at Colwall, Herefordshire (O.S. grid reference SO 7642); the trap was set on 10 June and emptied on 5 August. Although stated to be confined to pine and larch (Fraser, 1959. *Handbk Ident. Br. Insects I* (12 & 13), my previous encounter with the species was from pear and plum orchards in neighbouring Gloucestershire (Alexander, 2004. *Ent. Rec. J. Var.* 116: 113-114), and P. F. Whitehead (pers. comm.) associates it with oak and ash in another neighbouring county, Worcestershire. It is clearly a species of broad-leaved trees in the English West Midlands. Herefordshire appears to be a new county for the species (Plant, 1992. *Provisional atlas of the lacewings and allied insects (Neuroptera, Megaloptera, Raphidioptera and Mecoptera) of Britain and Ireland*). The specimen was identified using Plant (1997. A key to the adults of British lacewings and their allies. *Field Studies* 9: 179-269.)— KEITH N. A. ALEXANDER, 59 Sweetbrier Lane, Heavitree, Exeter EX1 3AQ (Email: keith.alexander@waitrose.com).

PRAYS OLEAE (BERNARD, 1788) (LEP.: YPONOMEUTIDAE) IN BRITAIN

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Abstract

Prays oleae (Bernard) (Lepidoptera: Yponomeutidae) is recorded from Britain for the first time. The species is described and illustrated and its life history is given as known in southern Europe.

Keywords: *Prays oleae*, Olive, adventive, Yponomeutidae.

Introduction

With the warming of our climate the olive tree *Olea europaea* is becoming more popular as a garden plant and is being stocked by a large number of Garden Centres. On 22 January 2009, AM visited a Garden Centre at Addlestone, Surrey and noticed mines on an olive tree which he collected together with a pupa. The pupa failed properly to emerge, but two larvae completed their development and the moths duly emerged. This was reported during 2009 on the Leafmines website at www.leafmines.co.uk/pdfs/news17.pdf by AM and represents the first recorded occurrence of the species in Britain. On 14 May 2009, DA met up with Fred (AGJ) Butcher who had a box of micros for identification, immediately DA saw a specimen of *Prays oleae* taken at m.v. light at Grain, Kent on 22 July 2008. Fred recalled that his wife had bought a small olive tree in 2007; if this was the source, then the species has successfully overwintered in Britain.

The moth is a well known pest of olives around the Mediterranean where, according to Pelekassis (1962), it was known as such to Pliny (77-79AD) since the third century BC. Since trees are imported from the south of Europe it is not surprising that the moth has arrived with them.

Nomenclature

Prays oleae (Bernard, 1788) (*Tinea*)

oleella (Fabricius, 1794) (*Tinea*)

olivella (Briganti, 1822) (*Tinea*)

accessella (Passerini, 1832) (*Tinea*)

moschettinella (Costa, 1839) (*Oecophora*)

adspersella (Heydenreich, 1851) (*Oecophora*)

Like many economically important Lepidoptera, it has been given more than one English name: Olive Kernel Borer or Olive Moth – the choice is a matter of whim. In the Checklist of Bradley (2000) it should be assigned the number 449c.



1



4



3



Plate 33. *Prays oleae* (Bernard). Figures 1 & 2, Adult. Figure 3, Larva. Figure 4, Mine in leaf of Olive *Olea europaea*

Description

Adult (Plate 33, Figs 1 & 2) Wingspan 11-13mm. Head, thorax and abdomen silvery grey; antennae simple, filiform. Forewings shining greyish white with variable blackish-brown markings. The male and female genitalia are figured by Apostolov (1990), the males also by Zagulyaev in Medvedev (1990). The species was extensively described and illustrated by Stainton (1870) and a full and scholarly account was given by Pelekassis (1962).

The egg is whitish, finely reticulate. The larva (Plate 33, Fig. 3) has head dark brown to black, prothoracic plate dark brown, paler towards margins, body greenish brown. There is an olive green subdorsal line and a pale brown subspiracular line, anal plate brown marked. Pupa brown, cremaster with eight short hooked spines.

Biology

In southern Europe there are three generations per year, the first generation larvae feed in flower buds and flowers, the second generation on the fruits and the third generation mines leaves and overwinters in this stage (Plate 33, Fig. 4), feeding externally in the early spring. It is uncertain how many generations there will be if the species manages to survive in Britain.

Discussion

Clearly the species has arrived in Britain as an adventive, further introductions are likely, but whether or not it will be able to survive in the wild in our climate is a matter of speculation. Since olives are not an economic crop here it makes no sense to regard it as a pest.

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***Metriotes lutarea* (Haworth) (Lep.: Coleophoridae) in Berkshire and an attempted rearing**

On 14 May 2008 I found a shiny grey coleophorid moth feeding on a flower of Greater Stitchwort *Stellaria holostea* at Jealott's Hill in Berkshire. On closer examination this proved to be a female *Metriotes lutarea* (Haw.). A second example was seen on the same extensive patch of plants on 21 May. This too was at rest on a greater stitchwort flower and was observed feeding. Adults are often found feeding on the flowers of greater during May (Emmet et al, 1996. In Emmet, (Ed.) *Moths and Butterflies of Great Britain and Ireland 3*). In his book on the *Butterflies and Moths of Berkshire* (1994), Brian Baker noted that this species was recorded for Berkshire in the Victoria County History of 1906. The only other occurrence recorded by him was of an adult, taken in similar circumstances to those found at Jealott's Hill, by Waters at Bagley Wood in 1924. Martin Harvey, the county Lepidoptera Recorder for Berkshire, tells me he has no further records of this moth for the county.

As *M. lutarea* has an unusual life history and has rarely been reared I decided to try it. In an attempt to find the larva, which feeds on ripening seeds within the seedpods of greater stitchwort, I collected seedpod-bearing plants on 1 and 11 June from the general area in which the moths were found. These plants were placed in a plastic fish tank, which was covered with cling film. The larvae excise the seedpod they mature in and utilise this as an improvised case while searching for a pupation site. Pupation takes place in the bark of near-by trees. The larvae bore into the tree bark prior to pupation, taking their tri-valved cases into the bark but leaving the seedpod case behind, loosely attached to the bark surface. For this reason I also added some dead oak bark to the fish tank. Over the next week or so a total of five perambulating seedpod cases, each containing a larva of *M. lutarea*, were found on the oak bark. When seen, I transferred these to a separate box containing freshly cut sallow and hawthorn bark, and pieces of oak bark. Here the larvae wandered around for about a week, but eventually they attached their seedpod cases to the surface of the oak bark. After several weeks I removed the seedpod cases and found that one larva had successfully entered the bark, as the end of its white tri-valved larval case was evident, embedded in the bark and level with the surface. The other four larvae had failed to enter the bark, only excising shallow depressions, and evidently had died. As no parasites emerged from their cases, parasitism was unlikely to be the cause of these losses. Perhaps this dry, dead bark was too hard for these small larvae to gnaw into. The larva that had successfully embedded in the oak bark was over-wintered in my shed and the adult emerged on 19 May 2009.

Earlier in the year, on 4 May, at the same locality as the adults were found in 2008, a further five adults were observed on flowers of greater stitchwort. Two of these were *in copula* at the time, providing evidence that *M. lutarea* bred at this site again this year.— I. SIMS, 2 The Delph, Lower Earley, Reading, Berkshire RG6 3AN.

THE IMMIGRATION OF LEPIDOPTERA TO THE BRITISH ISLES IN 2007

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Abstract

Formally accepted records of immigrant Lepidoptera occurring in the British Isles during the year 2007 are listed and discussed. For less frequently encountered species, full information is given in Annex 1, presented in vice-county order, the individual localities then listed alphabetically for each VC. For the more regular immigrant species, annual summaries and a selection of the most significant records are presented in Annex 2.

Introduction

The contrast between 2007 and the previous season couldn't have been much starker. Migration of Lepidoptera into the UK remained at a low ebb throughout most of the year, with any southerly airstreams being generally short-lived and at a premium during the summer and autumn months. The most significant event occurred during the last ten days of August with, for the second consecutive season, a large and widespread arrival of *Eurois occulta* (L.) from the east, with a few associated records of *Nymphalis antiopa* (L.), *Enargia paleacea* (Esp.) and *Syngrapha interrogationis* (L.). Weather charts associated with the period immediately prior to this significant immigration are shown below, exhibiting the north-easterly airstreams that predominated.

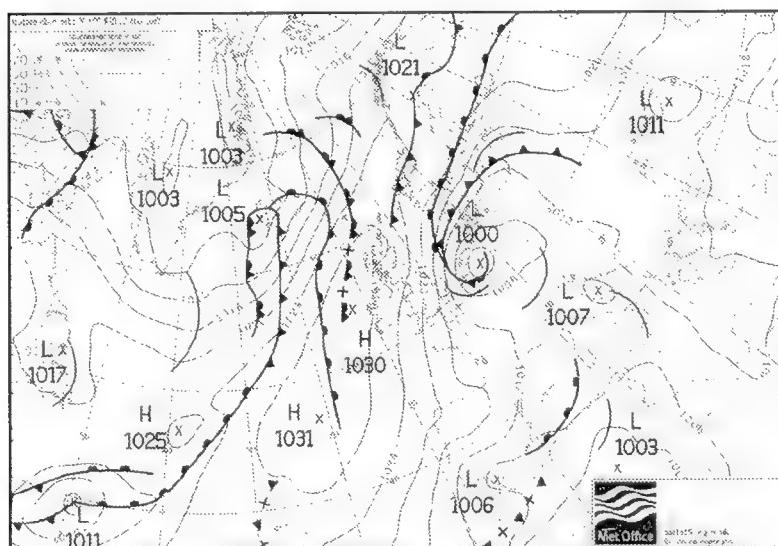


Figure 1. Weather system charts for 22 August 2007.

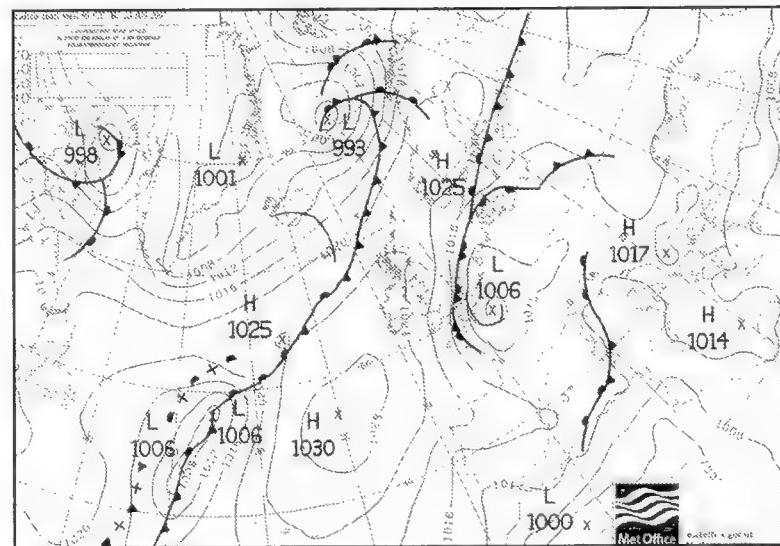


Figure 2. Weather system charts for 23 August 2007.

Numbers of regular migrant species were below average, and the relatively low numbers of species such as *Palpita vitrealis* (Rossi), *Rhodometra sacraria* (L.), *Spodoptera exigua* (Hb.), *Heliothis peltigera* (Hb.) and *Helicoverpa armigera* (D. & S.) allowed their re-inclusion in Annex 1 with received records listed in full, following several seasons of summarily detailed analyses in Annex 2. Whilst primary migrant examples of *Macroglossum stellatarum* (L.) were also in small

numbers, a high proportion of records came from the late winter and spring months when no active migration was evident, indicating a high survival rate among hibernating adults.

There were, however, a number of significant records of immigrant species in 2007 that included *Lithophane furcifera furcifera* (Hufn.) from VC67; *Actinotia hyperici* (D. & S.) from VC's 15 & 21; *Sedina buettneri* (Her.) from VC's 10 & 25, and a coastal record from VC9; *Catocala nymphagoga* (Esp.) from VC17; and *Catephia alchymista* (D. & S.) from VC14 for the second successive year. The origins of the first UK record of *Epinotia granitana* (H.-S.) from VC26 and the second UK record of *Diplopseustis perieresalis* (Walk.) from VC3 are perhaps more open to question.

Some of the most interesting records of the year involved probable introductions and included five new species to the UK: *Nemapogon falstriella* (Haas), *Conogethes punctiferalis* (Guen.), *Anthene definita* (Butler), *Pseudocoremia suavis* (Butler), and *Galgula partita* (Guen.). Two examples of the butterfly *Aporia crataegi* (L.) that were present in VC12 for a few days in late July were of uncertain origin and unlikely to involve primary immigrants, but attracted much attention at the time.

Guidelines for contributors

To avoid unnecessary delays in publishing future reports, it would help greatly if contributors adhere to the following guidelines: data should include the vice-county, recorder, stage (if not an adult), number observed, and the date. For light-trap records list the date the trap was switched on, not the date it was inspected. This is a universally accepted convention to avoid the possible duplication of records.

There remains a noticeable shortage of records from more northern and inland sites submitted for the current report. Records of migrant species from such sites would be gratefully received for future reports, and the regional summaries and categories of listed records for Annex 2 species have been introduced to take account of records of this nature. County recorders not already submitting migrant data for these annual reports are keenly requested to do so, even if their respective counties are not favourably positioned to receive arrivals. Migrant records from such northern & inland sites are often more significant in showing the range and scale of immigrations of species routinely recorded from more southern, coastal locations.

It should be noted that statistics relating to the total number and distribution of all records received/sourced of nocturnal Annex 2 species are now given, so please continue to submit records of all these species. It must also be stressed that it has become impossible to monitor the growing number of e-mail/website migrant forums and the posting of records on such sites will not necessarily result in their inclusion in future reports. It is therefore essential that migrant records are submitted to the relevant county recorder, published within the entomological press or sent directly to the report author.

Whilst able to source information published in the entomological press, the author is greatly reliant on county recorders to submit migrant records. However, despite direct approaches being made to this end, a number of county recorders have again failed to produce any information for inclusion in the following report, therefore preventing a completely comprehensive summary to be produced. Whilst additional, late records can be published in future appendices, it is always preferable that they are included within the report relating to the year of occurrence. If readers have recorded (or are aware of) significant migrant records from 2007 that are not in the current report but have been submitted to the relevant county recorder, it can be assumed these have not been forwarded to the author. The author would be pleased to receive such records and recorders in these counties are urged to send their records directly to the author or encourage their respective county recorders to make migrant records available for inclusion in future reports.

County recorders, or those submitting large volumes of data are asked to sort their data by vice-county, species name, and then by date order. Contributions are particularly welcome in electronic format (pref. MS Excel) to the author at the e-mail address given at the start of the report. Paper copies may also be submitted to the postal address over the page. Should readers be aware of any significant omissions or errors in this or earlier reports, these would be welcomed for inclusion in future appendices. Contributors are also requested to provide the middle initial(s) of recorders wherever possible to assist with the accreditation of records.

Recent reports have been extended to include the more interesting records of adventives as these often help to establish the origin of other records or colonisations of the respective or associated species. Extralimital records of resident species that may be the result of immigration or internal vagrancy are also included in reports. Records of this nature are therefore also welcome for inclusion in future reports.

The following abbreviations have been adopted since the 2002 report. These remain unaltered and exclude any variation in status found on the Channel Islands (VC113). However the categorisation of individual species is reviewed annually in the light of any recent/ongoing changes in status. A brief introductory statement has also been added to the accounts for a number of listed resident species in order to clarify the type of record that is included in these reports.

Abbreviations

[I] - Primary immigrant or the direct progeny of a primary immigrant. Where this is the only category given, believed to relate to a species that is unable to maintain a viable, self-sustaining resident population through a typical British winter.

[In] – Introduction or importation. A species artificially introduced into Britain by man. Can include synanthropic species that are only able to sustain breeding populations in Britain under conditions that do not occur naturally.

[MC] – Migrant Colonist. An immigrant species that has established extant, short-term breeding populations in Britain, but these believed to have been present for fewer than ten consecutive years.

[R] – Resident. A species with an established breeding population in Britain, this having been present for a minimum of ten successive years.

[FR] – Former Resident. A species that was formerly an established resident but has no known resident populations in Britain at the time of writing.

[V] – Vagrant/wanderer. A species recorded well away from its known British breeding range, but the record most likely to have been the result of internal, domestic dispersal.

Channel Islands (VC113) records are no longer included in the main species accounts due to their southerly position, locating them outside the biogeographical area of Great Britain and Ireland. This often leads to differing statuses of listed species within VC113 and occurrence patterns of immigrant species that are not comparable with records in Great Britain and Ireland. However, records of recent colonists and rare immigrants in VC113 can be precursors of arrivals in Britain, so significant VC113 records are given in Annex 3.

ANNEX 1: RECORDS OF SCARCE SPECIES IN 2007

TINEIDAE

- 0221a *Nemapogon falstriella* (Haas) [In?]

E. SUFFOLK [25] Ipswich, 8.8 (adult inside polytunnel tunnel), new to Britain (NS, in Langmaid & Young, 2009).

- 0277 *Oinophila v-flava* (Haw.) [R][In][I?]

E. KENT [15] Pegwell, 30.8, flying by day (Solly *et al.*, 2008).

MID CORK [H4] Cork City, 12.8, first VC and modern Irish record (KGMB, in Langmaid & Young, 2009).

CASTNIIDAE

- 0384a *Paysandisia archon* (Burmeister) [In]

A total of nine adults and three larvae recorded from two undisclosed sites in Kent and North London between May and July 2007. These were associated with palms imported from Spain and Italy respectively, all affected plants being destroyed by DEFRA to prevent the spread of this potential pest species (Reid, 2008).

YPONOMEUTIDAE

- 0424 *Yponomeuta evonymella* (L.) [R][I/V]

A widely recorded species, most coastal records away from the larval foodplant are thought likely to relate to migrants or wanderers. A selection of submitted records most likely to relate to immigrant activity is given, though this is in no way a comprehensive summary.

W. CORNWALL [1] IOS: Longstone, St Mary's, 9.8 (MWS). E. KENT [15] Iwade, 9.7, 13.7 (IC); New Romney, 12.7, 15.7 (SPC).

- 0428 *Yponomeuta rorrella* (Hb.) [R][V/I]

Coastal records of possible immigrant examples.

DORSET [9] Puddletown, 25.7 (HWH). S. HAMPSHIRE [11] Southsea, 14.7 (IRT per TN). E. KENT [15] Dungeness, 10.8 (DW). E. NORFOLK [27] Eccles-on-sea, 9.8 (NB per DH); Scole, 14.7 (M. Hall per DH).

0449b *Prays peregrina* Agassiz [In]

W. KENT [16] Grain, 24.8 (AGJB); Sidcup, 14.9 (2) (D. Macklin, in Agassiz, 2007). SURREY [17] Barnes, 24.8 (MRH, in Agassiz, 2007); Chessington, 5.9 (JPO); Wimbledon, 10.7, 8.9, 2.10, first VC records (VVP, in Agassiz, 2007). MIDDLESEX [21] Wembley, 24.6 (GG, in Agassiz, 2007).

0473 *Acrolepiopsis assectella* (Zell.) [R][I/V]

Coastal/extralimital records of possible immigrant examples.

E. CORNWALL [2] Torpoint, 23.7, first VC record (LACT, in Langmaid & Young, 2009).

OECOPHORIDAE**0642a** *Metalampra italica* Baldizzone [I/In/MC?]

SURREY [17] Merrow Downs, 28.7, first VC record (VVP, in Dickson, 2008).

COSMOPTERIGIDAE**0896b** *Cosmopterix pulchrimella* Stt. [MC][I]

W. CORNWALL [1] IOS: St Mary's, 11-17.10 (13 adults at light at four sites), 16.10 (larval mines at one site); first Scillies records (Scott, 2008a). ISLE OF WIGHT [10] Binstead, 24.12, mine (DTB per TN); Bonchurch, 17.1, mine (DTB per TN). S. HAMPSHIRE [11] Portchester, 4.1, 26.12, mines (JRL, IRT, TN).

TORTRICIDAE**0955** *Eupoecilia ambiguella* (Hb.) [R][V/I]

Coastal/extralimital records of possible immigrant examples.

S.E. YORKSHIRE [61] Spurn, 4.8, 12.8 (Spence, 2008).

1144a *Epinotia granitana* (H.-S.) [I/In?]

W. SUFFOLK [26] Elveden Forest, 15.5, new to Britain (HEB, in Dickson, 2008).

1166 *Zeiraphera griseana* (Hb.) [R][I/V]

Coastal records away from suitable breeding habitat.

DORSET [9] Puddletown, 27.7 (HWH).

1215 *Thaumatotibia leucotreta* (Meyr.) [In]

DURHAM [66] Darlington, 19.8, found indoors, first VC record (AJW, in Langmaid & Young, 2009).

1262 *Cydia amplana* (Hb.) [I]

Total no. reported: 20

By vice-county: 2 (1), 3 (1), 9 (2), 10 (1), 11 (11), 15 (3), 25 (1).

E. CORNWALL [2] Torpoint, 2.9 (DA per LACT). S. DEVON [3] Abbotskerswell, 11.8 (BPH per LJH). N. SOMERSET [6] Burnham-on-sea, 11.8 (A. Slade per M. Yeates). DORSET [9] Puddletown, 24.8 (HWH); Wyke Regis, 28.8 (DF). ISLE OF WIGHT [10] Totland, 27.8 (SAK-J, in Dickson, 2008). S. HAMPSHIRE [11] Funtley, 25.8 (MLO per TN); Hengistbury Head, 1.8 (2) (MJ, in Davey, 2008); Pennington, 24.8, 25.8 (RCO per TN); Sandy Point, Hayling Island, 11.8, 28.8 (Phillips & Johnson, 2008); South Brockenhurst, 23.8, 25.8, 1.9, 5.9 (RBW per TN). E. KENT [15] Dymchurch, 31.8 (JO); Ramsgate, 6.9, 14.10 (Solly *et al.*, 2008). E. SUFFOLK [25] Ipswich, 12.8 (NS per AWP).

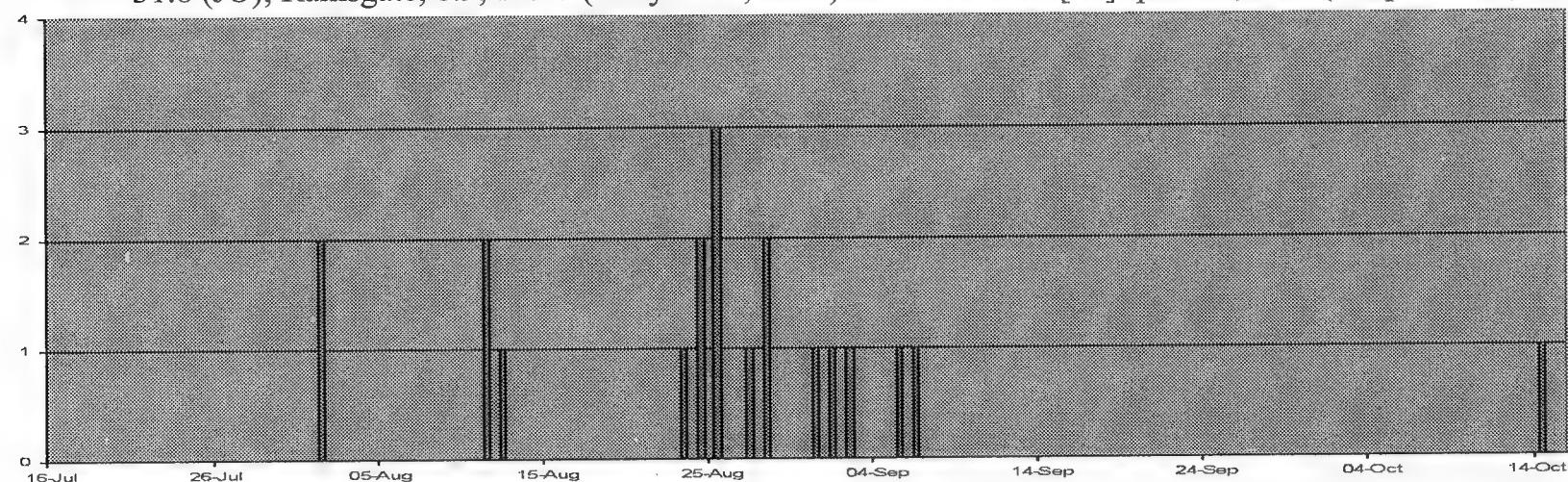


Figure 3. Occurrence times of *Cydia amplana* during 2007.

PYRALIDAE**1289** *Euchromius ocellea* (Haw.) [I]

W. CORNWALL [1] Church Cove, The Lizard, 5.1 (Tunmore, 2008). DORSET [9] West Bexington, 31.1 [incorrectly dated 23.1 in Eden (2008)] (Sterling, 2008; RED per PAD). S.E. YORKSHIRE [61] Kilnsea, 24.8 (BRS per CHF).

- 1291** *Haimbachia cicatricella* (Hb.) [I][MC?]
E. KENT [15] Greatstone, 15.7 (JJo).
- 1356a** *Evergestis limbata* (L.) [R][V/I]
An established resident in VC's **10, 11, 13, 14 & 15**; records only listed outside these VC's, but most likely to relate to range spread.
DORSET [9] Coldharbour, 7.6 (BW, in Davey, 2008); Swanage, 17.6, 18.8 (R. Cox, in Davey, 2008). E. SUFFOLK [25] Walberswick, July (GBS per SPC).
- 1357** *Evergestis extimalis* (Scop.) [R][I][V]
An established resident in parts of southern England and East Anglia, recorded more sporadically elsewhere, and consequently records have not been included in the current report from VC's **13, 14, 15, 18, 19, 25, 26, 27 & 28**. The following records are from areas where resident populations are not currently known, and are likely to relate to immigrant or vagrant examples.
W. CORNWALL [1] Church Cove, The Lizard, 26.8 (Tunmore, 2008). DORSET [9] Portland Bird Observatory, 11.8 (2), 8.9 (Sterling, 2008); West Bexington, 19.5, 31.5, 21.8 (Sterling, 2008). ISLE OF WIGHT [10] Bonchurch, 10.8, 11.8, 21.8 (JH). S. HAMPSHIRE [11] Sandy Point, Hayling Island, 31.5 (AJo per TN). S.E. YORKSHIRE [61] Spurn, 22.8, 7.9 (BRS). SHETLAND ISLANDS [112] Eswick, 9.8, new to Scotland (T. Rogers, in Langmaid & Young, 2009).
- 1360** *Hellula undalis* (Fabr.) [I]
W. CORNWALL [1] IOS: Longstone, St Mary's, 1.10 (Scott, 2008a).
- 1368** *Loxostege sticticalis* (L.) [I][FR]
S. HAMPSHIRE [11] Southsea, 1.8 (IRT per TN). E. KENT [15] New Romney, 5.8 (SPC); Ruckinge, 21.7 (B. Boothroyd). E. SUFFOLK [25] Dunwich Heath, 28.7 (Moore, 2008); Butley, 6.9, by day (NM per AWP). E. NORFOLK [27] Scole, 13.7 (M. Hall per DH). S.E. YORKSHIRE [61] Lund, 24.8 (M. Coverdale per CHF).
- 1370** *Sitochroa palealis* (D. & S.) [I/V][R]
Coastal/extralimital records that may relate to immigrant examples.
W. CORNWALL [1] IOS: Longstone, St Mary's, 14.7 (Scott, 2008a). E. CORNWALL [2] Downderry, 17.7, first VC record [incorrectly dated as 11.7 in Langmaid & Young (2009)] (JCN per LACT). E. SUSSEX [14] Icklesham, 24.8 (Hunter, 2008). E. KENT [15] Dungeness, 25.8 (PGA); Greatstone, 27.7 (BB). SURREY [17] Milford, 22.7 (per JP). E. SUFFOLK [25] Bawdsey, 17.8 (Deans, 2008).
- 1374a** *Sclerocona acutellus* (Evers.) [In][I?]
N. DEVON [4] Zeal Monachorum, 17.6 (S. Beavan per RFM).
- 1375** *Ostrinia nubilalis* (Hb.) [R][I][V]
An established resident in south-east England, recently extending its range westward and northward, and consequently records have not been included in the current report from the southern and eastern seaboard counties between VC's **9 & 27**, and inland to VC's **12, 16 & 17**. The following records are probably the result of internal range expansion, although fresh immigration from the continent is a possibility, particularly for the more coastal records.
W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6, 12.8 (2) (MWS); Maenporth, July (1) (Davis, 2008). S. DEVON [3] Uplyme, 22.7 (AK).
- 1382** *Anania verbascalis* (D. & S.) [R][I/V]
S. DEVON [3] Teignmouth, 19.7, second VC record (RFM).
- 1397a** *Diplopseustis perieresalis* (Walk.) [I/In]
S. DEVON [3] Heavitree, Exeter, 4.11, first VC and second British record [incorrectly dated as 5.11 in Langmaid & Young (2009)] (McCormick, 2008a). N.B. The first British record occurred on 19.10.2001 [not 2002 as stated in the note].
- 1401** *Maruca vitrata* (Fabr.) [In][I]
S.E. YORKSHIRE [61] Hull, 24.4, indoors, first VC record (N. Abramson per CHF).
- 1403** *Diasemiopsis ramburialis* (Dup.) [I]
Total no. reported: **16**
By vice-county: **1** (13), **3** (1), **14** (1), **15** (1).
W. CORNWALL [1] IOS: Longstone, St Mary's, 12.6 (2), 6.8, 12.8, 13.8, 14.8 (2), 16.8, 30.8, 6.9, 12.9 (Scott, 2008a); Maenporth, 12.6, 26.8 (Davis, 2008). S. DEVON [3] Uplyme, 23.8 (AK). E. SUSSEX [14] Heathfield, 26.10 (DRML per CRP). E. KENT [15] Ruckinge, 7.7 (B. Boothroyd).

1403a *Duponchella fovealis* (Zell.) [I][In]

SURREY [17] Godalming, 29.10, second VC record (VJS, in Dickson, 2008). BUCKINGHAMSHIRE [24] Walter's Ash, 29.4, indoors (N. Fletcher per MVA).

1408 *Palpita vitrealis* (Rossi) [I]

Total no. reported: 42

By vice-county: 1 (13), 2 (1), 9 (7), 11 (2), 14 (4), 15 (7), 17 (1), 25 (4), 27 (1), 61 (1), H6 (1).

W. CORNWALL [1] IOS: Longstone, St Mary's, 16.6, 13.8, 20.9, 21.9, 30.9 (2), 1.10, 2.10 (2), 3.10, 15.10, 7.11 (MWS); Mullion, 3.9 (MTh per APJ). E. CORNWALL [2] Veryan, 1.10 (PK per APJ). DORSET [9] Portland Bird Observatory, 28.7, 6.8 (MC, in Sterling, 2008); Preston, 16.7 (RLa, in Sterling, 2008); Puddletown, 21.6, 4.7 (HWH); West Bexington, August (1) (Eden, 2008); Weymouth, 21.6 (PH). S. HAMPSHIRE [11] Christchurch, 21.9 (RCh per TN); Southsea, 6.10 (JRL per TN). E. SUSSEX [14] Bexhill, 7.8, 13.8 (KNA per CRP); Icklesham, September (1) (Hunter, 2008); Wadhurst, 3.10 (AECA per CRP). E. KENT [15] Dungeness, 28.9 (KRe); Dymchurch, 4.8 (JO); Kingsdown, 19.6 (Jarman & Morris, 2008); Kingsgate, 23.9 (FS); Newington, 4.8 (PM); Pegwell, 16.10 (FS); Westgate, 5.10 (TH). SURREY [17] Aldershot, 11.8 (A. Theaker per LJH). E. SUFFOLK [25] Landguard, 30.7, 4.8, 10.10, 28.10 (MCM, NO per AWP). E. NORFOLK [27] Trowse, 21.9 (J. Sutton per DH). S.E. YORKSHIRE [61] Spurn, 1.8, first VC record (Spence, 2008).

WATERFORD [H6] Tramore, 10.10 (ABr, in Walsh *et al.*, in press).



Figure 4. Occurrence times of *Palpita vitrealis* during 2007 (dated records).

1412a *Conogethes punctiferalis* (Guen.) [In]

E. CORNWALL [2] Torpoint, 23.6, at light, the first confirmed British record (LACT).

Three larvae of this species were intercepted at Birmingham Airport on 2.10 in Guava *Psidium guajava* fruit imported from Pakistan, an adult being bred from these on 4.11 (per C. Malumphy, via MSP).

[Probable larvae of this species were also intercepted at Birmingham Airport in February on Guava fruit imported from Pakistan; these failed to produce adults so their identification could not be confirmed (per C. Malumphy, via MSP).]

1433 *Cryptoblabes bistriga* (Haw.) [R][V/I]

Coastal records away from suitable breeding habitat.

W. CORNWALL [1] IOS: Longstone, St Mary's, 13.6 (Scott, 2008a).

1435 *Conobathra tumidana* (D. & S.) [I]

E. KENT [15] Dymchurch, 12.8 (JO).

1449 *Elegia similella* (Zinck.) [R][I/V]

Coastal records away from known populations that may relate to immigrants.

S. DEVON [3] Rockbeare, 11.6, second VC record (MK, in Dickson, 2008). DORSET [9] Verwood, 11.6 (C. Court, in Sterling, 2008).

1454 *Dioryctria abietella* (D. & S.) [R][I][V]

Coastal records away from suitable breeding habitat that may relate to immigrants.

W. CORNWALL [1] Falmouth, 12.9 (JBC per APJ); IOS: Longstone, St Mary's, June (20), July (2), August (3), September (3), October (1) (MWS); Mullion, 11.6 (MTh per APJ). E. KENT [15] Dungeness, 17.6 (DW). E. NORFOLK [27] Eccles-on-Sea, 23.8, 30.8 (Bowman, 2008); Horning, 24.8 (P. Heath per DH). S.E. YORKSHIRE [61] Spurn, 16.6, 19.6 (Spence, 2008). S. ABERDEENSHIRE [92] Blackdog, 10.6, by day (NL).

WATERFORD [H6] Tramore Bay, 1.7 (Bryant & Walsh, 2008).

1454b *Dioryctria sylvestrella* (Ratz.) [MC][I][V]

Now breeding locally in southern and south-east England, the following coastal or extralimital records may relate to fresh immigration or internal vagrancy.

W. CORNWALL [1] Maenporth, 23.6 (Davis, 2008). ISLE OF WIGHT [10] Bonchurch, 25.8 (JH).

S. HAMPSHIRE [11] Pennington, 15.7 (RCO per TN); Portchester, 11.6, 17.7 (J. Stokes per TN). E.

KENT [15] Pegwell, 27.7 (Solly *et al.*, 2008); Ramsgate, 31.8 (Solly *et al.*, 2008). E. SUFFOLK

[25] Landguard, 10.6, 14.6, 23.8 (Odin, 2008).

1465 *Nephopterix angustella* (Zell.) [R][V/I]

Extralimital/coastal records with a potentially immigrant origin.

W. CORNWALL [1] Maenporth, 10.9, 7.10, 8.10 (Davis, 2008). DORSET [9] Walditch, 13.6 (Parsons & Brereton, 2008). E. SUFFOLK [25] Dunwich Heath, 5.9 (Moore, 2008).

1467 *Ancylosis oblitella* (Dup.) [R][I/V]

Extralimital/coastal records with a potentially immigrant origin.

ISLE OF WIGHT [10] Ventnor, 9.6 (4) (TDC, SC per TN). S. HAMPSHIRE [11] Strouden Park, 14.7 (Sterling, 2008). E. KENT [15] New Romney, 5.8 (KRe).

1475 *Ephestia kuehniella* (Zell.) [In][I]

S. DEVON [3] Holcombe, 7.9 (2) [incorrectly dated as 9.7 in Dickson (2008)] (RFM).

1478b *Vitula biviella* (Zell.) [MC][V/I]

Records away from VC's 15 & 25 where localised breeding populations are currently thought to be established and records are most likely to relate to domestic dispersal.

MIDDLESEX [21] Barnet, 12.7, first VC record (RT, in Langmaid & Young, 2009).

1479 *Plodia interpunctella* (Hb.) [In]

E. KENT [15] Dymchurch, colony in stables (JO); Iwade, September (IC per JPo). E. SUFFOLK [25] Dunwich, 20.6 (Moore, 2008). GLAMORGAN [41] Cwmbach, 2.9 (Gilmore, 2008); Llanishen, 22.3, indoors (Gilmore, 2008). CARMARTHENSHIRE [44] Penclacwydd, 16.9, indoors, first VC record (Langmaid & Young, 2009). BANFFSHIRE [94] Portsoy, 4.4, infestation in animal feed, first VC record (Langmaid & Young, 2009).

1480 *Homoeosoma nebulosa* (D. & S.) [R][V/I]

Coastal/extralimital records that may refer to immigrants.

DORSET [9] Puddletown, 6.6 (HWH, in Sterling, 2008). ISLE OF WIGHT [10] Totland, 1.8, 26.8 (SAK-J, in Dickson, 2008).

PTEROPHORIDAE**1496 *Cnaemidophorus rhododactyla* (D. & S.) [R][I/V]**

Coastal/extralimital records that may relate to immigrants.

E. SUFFOLK [25] Bawdsey, 12.7 (Deans, 2008); Hollesley, 10.7 (Deans, 2008).

PAPILIONIDAE**1539 *Papilio machaon* (L.) Swallowtail [R][I][In?]**

The following records are all likely to relate to continental race *gorganus* (Fruhs.).

S. DEVON [3] Paignton, 11.8 (C. Bath). N. DEVON [4] Tiverton, 20.9 (K. Furmedge). ISLE OF WIGHT [10] Culver Down, 1.9 (P. Box, in Knill-Jones, 2008a). E. KENT [15] Capel-le-Ferne, 6.4 (IR, NLJ).

PIERIDAE**1548 *Aporia crataegi* (L.) Black-veined White [FR][In/I]**

N. HAMPSHIRE [12] Stockbridge Down, 24.7 (2), one killed by a wasp on 27.7 but one still present until at least 30.7 (per NB *et al.*).

1549 *Pieris brassicae* (L.) Large White [R][I]

High coastal counts or light-trap records potentially relating to primary migrants.

E. SUFFOLK [25] Bawdsey, 2.9, two at MV (Deans, 2008).

1552 *Pontia daplidice* (L.) Bath White [I]

[An unconfirmed report from Micheldever [12] on 15.7 (K. Haviland).]

LYCAENIDAE**1567 *Lampides boeticus* (L.) Long-tailed Blue [I][In]**

W. CORNWALL [1] IOS: Porthmellon, St Mary's, 6.10 (per J. Worth). S. HAMPSHIRE [11] Gosport, 3.9 (per NB). N. ESSEX [19] Coggeshall, 17.9 (B. Corben).

Unlisted *Anthene definita* (Butler) Common Hair-tail [In]

S. HAMPSHIRE [11] Farlington, Portsmouth, 16.6, indoors (P. Hatton); the recorder had returned from South Africa in mid-May 2007, so may have accidentally imported this butterfly in an earlier life-cycle stage.

NYMPHALIDAE**1594 *Nymphalis polychloros* (L.) Large Tortoiseshell [I][In?][FR][MC?]**

Total no. reported: 46

By vice-county: 1 (1), 3 (5), 7 (1), 9 (12), 10 (10), 11 (6), 13 (3), 14 (3), 15 (1), 17 (3), 25 (1).

W. CORNWALL [1] Gwithian, 19.9 (J. Wacher). S. DEVON [3] Budleigh Salterton, 29.6, 9.7, 10.7 (C. Root, G. Jones); Musbury, 20.6 (M. Lock); Sidmouth, 6.7 (R. Boswell). N. WILTSHIRE [7] Biddestone, 19.4 (per NB). DORSET [9] Arne, 7.7 (per NB); Brownsea Island, 14.7 (per NB); Church Knowle, 7.7 (per NB); Portland, 27.1, 3.3, 7.7 (2), 11.7 (2), 18.7, 19-20.7, 22.7 (Cade, 2008). ISLE OF WIGHT [10] Afton Down, 9.4; Atherfield, 21.3, 15.7; Cranmore, 4.4; Lake, 20.6; Newport, 21.6; Ningwood, 7.7; Seaview, 6.7; Ventnor, 20.6; Whitwell, 17.2 (Knill-Jones, 2008a). S. HAMPSHIRE [11] Gosport, 11.7 (2) (per NB), 14.7 (D. Tinling); New Forest, 5.7 (per C. Stephens); New Milton, 30.7 (G. Palmer); Titchfield Haven, 20.6 (S. Ball). W. SUSSEX [13] Haywards Heath, 7.7 (per NB, CRP); Littlehampton, 26.6 (N. & E. Hulme per CRP); S. Crawley, 3.3 (V. Massimo per CRP). E. SUSSEX [14] Hurstmonceux, 28.6 (M. Smith per CRP); Saltdean, 15.7 (D. West per CRP); Seaford, 21.6 (K. West per CRP). E. KENT [15] Lydd, 7.8 (KRe). SURREY [17] Botany Bay, 1.5, 2.5 (2) (per NB). E. SUFFOLK [25] Shingle Street, 12.8 (Deans, 2008).

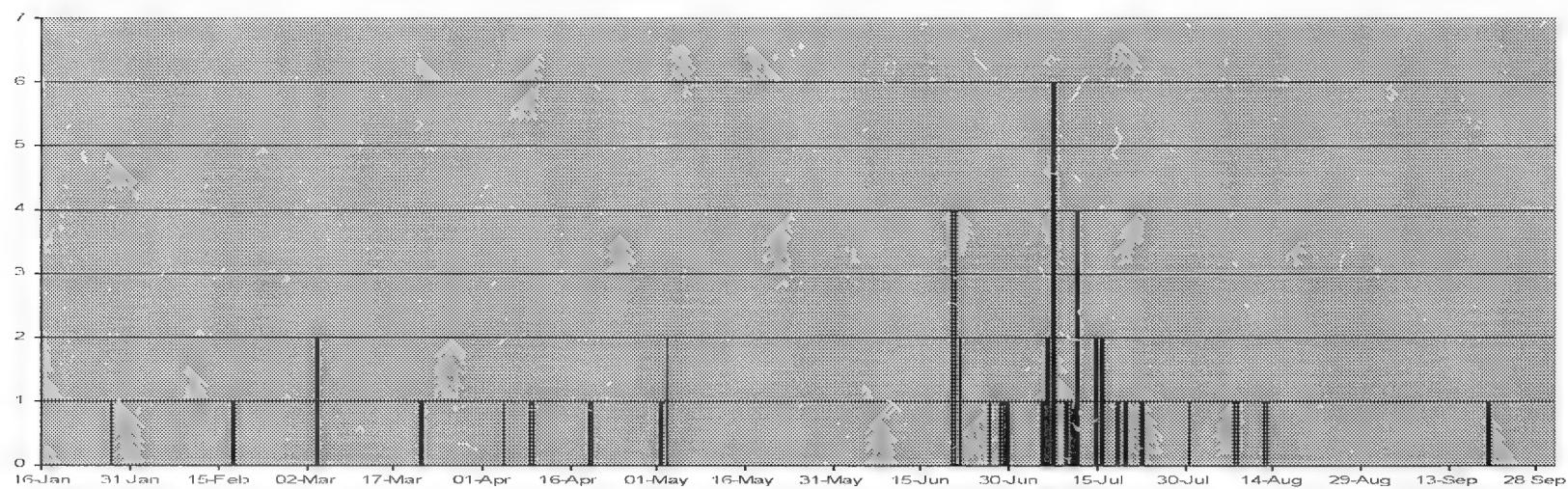


Figure 5. Occurrence times of *Nymphalis polychloros* during 2007.

1596 *Nymphalis antiopa* (L.) Camberwell Beauty [I][In?]

Total no. reported: 41

By vice-county: 2 (1), 6 (1), 8 (1), 9 (1), 10 (1), 13 (1), 14 (4), 15 (1), 18 (2), 19 (7), 25 (5), 26 (3), 27 (3), 29 (3), 92 (1), 95 (2), 106 (2), 107 (2).

E. CORNWALL [2] St Enodoc Golf-course, Rock, 27.8 (BWO). N. SOMERSET [6] Bath, c.14.4 (per NB). S. WILTSHIRE [8] Bishopstone, Salisbury, 6.9 (per NB). DORSET [9] Portland Bird Observatory, 5.4 (Cade, 2008). ISLE OF WIGHT [10] Sandford, 27.8 (Knill-Jones, 2008a). W. SUSSEX [13] Hove, 11.3 (per NB). E. SUSSEX [14] Eastbourne, 14.7 (A. Jones); Friston, 29.8 (DNB); Northiam, 15.8 (B. Banks); Peasmarsh, 31.1 (J. Als per DNB). E. KENT [15] New Romney, 28.8 (RET per SPC). S. ESSEX [18] Thundersley, 27.8 (2) (A. Jarrett). N. ESSEX [19] Colchester, 15.4 (P. Sparks), 28.8 (per J. Firmin); Great Totham, 25.8 (R. & D. Graves); High Easter, 25.8 (K. Hoy); Langenhoe, 28.8 (H. Owen); Radwinter, 29.8, 2.9 (C. Cochran). E. SUFFOLK [25] Hintlesham, 25.3 (per NB); Minsmere, 2.4, 6.9, 7.9 (2) (Harvey & Higgott, 2008). W. SUFFOLK [26] Bury St Edmunds, 16.3 (per NB); Hartest, 12.3 (per NB); West Stow, 11.3 (per NB). E. NORFOLK [27] High Kelling, 7.4 (per NB); Lowestoft, 27.3 (per NB); Norwich, 27.3 (per NB). CAMBRIDGESHIRE [29] Great Wilbraham, 31.3 (P. Dawson); Hardwick, 24.8 (T. Sawyer); Odsey, nr. Baldock, 27.8 (B. Needham). S. ABERDEENSHIRE [92] Nr. Aboyne, 30.4, at c.600 feet (McKellan, 2008). MORAY [95] Culbin, 1.5 (S. Taylor, in McKellan, 2008); Nethy Bridge, 13.4 (J. Poyner, in McKellan, 2008). E. ROSS [106] Ardgay, 14.4 (McKellan, 2008); Munlochy, Black Isle, 12.4 (D. Murray, in McKellan, 2008). E. SUTHERLAND [107] Golspie, 12.4 (T. Mainwood, in McKellan, 2008); Invershin, Bonar Bridge, 26.3 (A-M. Smout, in McKellan, 2008).

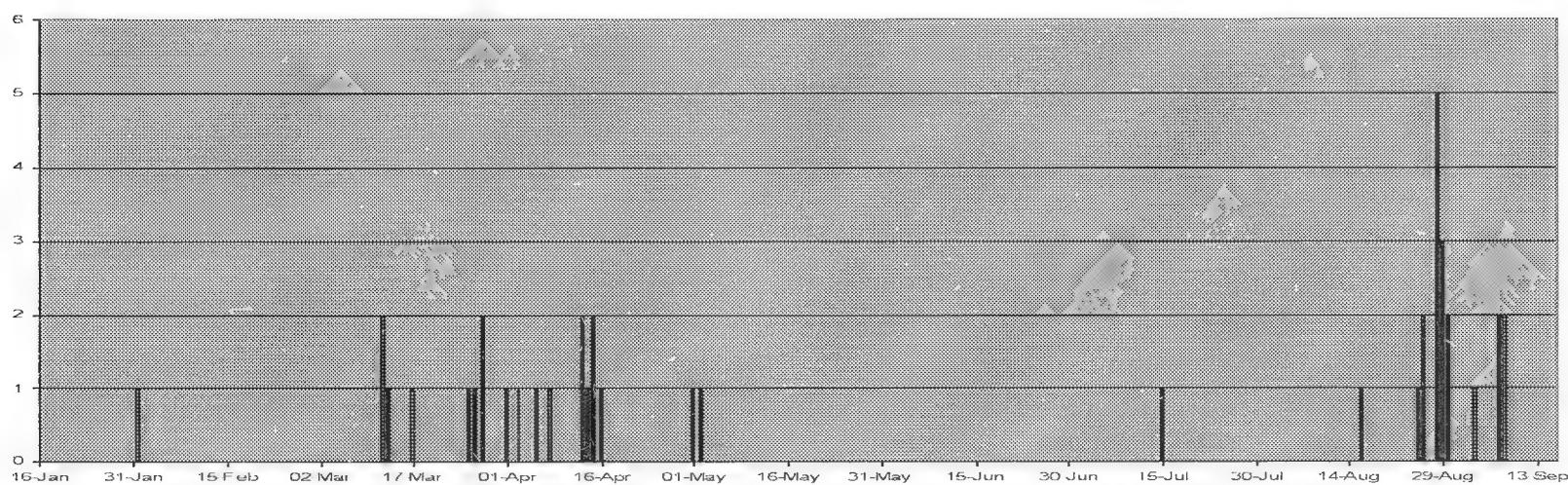


Figure 6. Occurrence times of *Nymphalis antiopa* during 2007.

1603 *Issoria lathonia* (L.) Queen of Spain Fritillary [I][In?]

W. CORNWALL [1] IOS: Longstone, St Mary's, 11.7 (MWS). S. SOMERSET [5] Blackdown Hills, 5.5 (per NB). S. HAMPSHIRE [11] Old Winchester Hill, 14.6 (H. Kemm). W. SUSSEX [13] Storrington, 18.4 (N. Hulme per CRP). E. KENT [15] Newenden, 25.8 (C. Luckens per BFS). [Also an unconfirmed record of two examples at Kingley Vale NNR [13] on 27.9 (per NB, CRP).]

1608 *Argynnis paphia* (L.) Silver-washed Fritillary [R][I/V]

Coastal records away from suitable breeding habitat that may relate to immigrants. DORSET [9] Portland Bird Observatory, 7.7 (Cade, 2008).

DANAIDAE

1630 *Danaus plexippus* (L.) Monarch [I][In]

ISLE OF WIGHT [10] Ventnor, 7.8, 12.8 (per NB).

LASIOCAMPIDAE

1639 *Dendrolimus pini* (L.) Pine-tree Lappet [I][In/MC]

E. INVERNESS-SHIRE [96] Kiltarlity, 19.6, 22.6 (RK).

SATURNIIDAE

Unlisted *Actias selene* (Hb.) Indian Moon Moth [In]

ISLE OF WIGHT [10] Totland, 10.8, at light (SAK-J, in Clancy, 2008b).

DREPANIDAE

1649 *Drepana curvatula* (Borkh.) Dusky Hook-tip [I]

S. DEVON [3] Uplyme, 2.6, first VC record (McCormick, 2008b).

GEOMETRIDAE

1672 *Thalera fimbrialis* (Scop.) Sussex Emerald [R][I][V]

Records away from the known population in VC15.

E. KENT [15] St Margaret's at Cliffe, 1.8 (AJM per SPC).

1678 *Cyclophora pupillaria* (Hb.) Blair's Mocha [I]

Total no. reported: 61

By vice-county: 1 (5), 9 (4), 10 (16), 11 (4), 13 (23), 14 (4), 15 (3), 18 (1), 25 (1).

W. CORNWALL [1] IOS: Longstone, St Mary's, 1.10, 3.11 (2), 4.11 (Scott, 2008a); IOS: St Mary's, 31.10 (Scott, 2008a). DORSET [9] Ashington, 18.5 (Davey, 2008); Burton, 5.8 (Davey, 2008); Charmouth, 6.8 (GS, in Davey, 2008); Studland, 28.8 (DCGB). ISLE OF WIGHT [10] August (4), October (11), November (1) (Knill-Jones, 2008a), inc. Bonchurch, 5.8 (2), 11.8 (JH), and Totland, 12.10, 3.11 (SAK-J, in Clancy, 2008b). S. HAMPSHIRE [11] Hill Head, Stubbington, 22.5 (RJC per TN); Mengham, Hayling Island, 25.9, 3.10, 8.10 (SJW, in Phillips & Johnson, 2008). W. SUSSEX [13] Chichester, 13.7 (MCP per CRP); Ferring, 24.4, 9.7, 7.9 (3), 28.9, 29.9 (2), 6.10, 13.10 (6), 2.11 (4) (THF); Walberton, 22.4, 19.5, c.21.8 (JTR per CRP). E. SUSSEX [14] Bexhill, 16.4, 12.5, 24.5 (JS, D. Crawley, KNA per CRP); Rye, 18.4 (PBo per CRP). E. KENT [15] Beltinge, 30.7 (BH); Faversham, 13.5 (R. Gomes per SPC); Kingsgate, 24.5 (Solly *et al.*, 2008). S. ESSEX [18] Bradwell-on-sea, 5.8 (Dewick, 2008). E. SUFFOLK [25] Ipswich, 24.5 (NS per AWP).

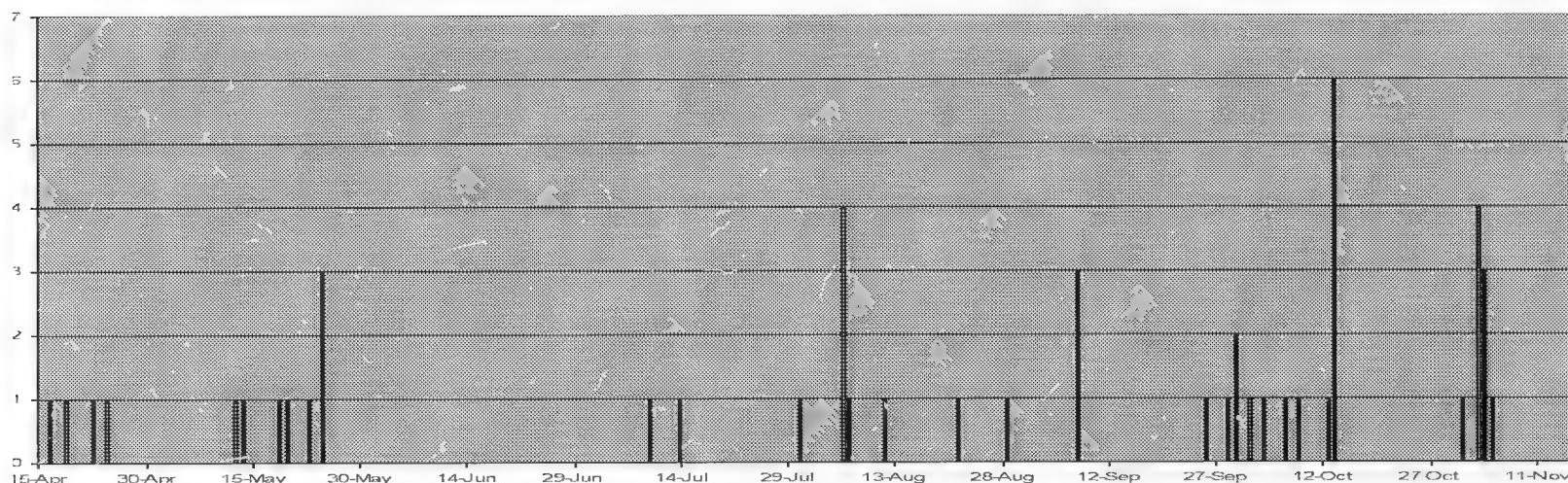


Figure 7. Occurrence times of *Cyclophora pupillaria* during 2007 (dated records).

1678a *Cyclophora ruficiliaria* (H.-S.) Jersey Mocha [I][MC]

W. CORNWALL [1] Maenporth, 7.8, 10.8 (2), 11.8, 19.8, 20.8, 22.8, 9.9 (Davis, 2008); from the same locality as the two recorded in 2006 (see Clancy, 2008c) and likely to relate to locally-bred adults.

1688 *Scopula rubiginata* (Hufn.) Tawny Wave [R][I][V]

Coastal records from VC25 are included but are likely to be associated with resident populations. E. SUFFOLK [25] Dunwich Heath, 6.8 (2) (Moore, 2008).

1696 *Idaea ochrata* (Scop.) Bright Wave [R][I/V]

Records away from the known populations in VC15.

E. SUFFOLK [25] Bawdsey, 16.6 (MJD per SPC); Orfordness, 13.7 (J. Askins, MCM per AWP).

1699 *Idaea rusticata* (D. & S.) Least Carpet [R][I][V]

Coastal/extralimital records of possible immigrant examples.
DORSET [9] West Bexington, 10.8 (Eden, 2008).

1714 *Idaea degeneraria* (Hb.) Portland Ribbon Wave [R][I/V]

Coastal records away from VC9, or autumn records, that may relate to immigrants, vagrants or undiscovered colonies.

W. CORNWALL [1] Maenporth, 3.5, 17.9 (Davis, 2008). E. CORNWALL [2] Torpoint, 6.6, 21.9 (AP, DA per LACT). S. HAMPSHIRE [11] Lymington, 6.9 (PD per TN).

1716 *Rhodometra sacraria* (L.) Vestal [I]

Total no. reported: 18

By vice-county: 9 (3), 11 (1), 12 (1), 13 (1), 14 (3), 15 (4), 17 (1), 71 (3), H6 (1).

DORSET [9] Bridport area, August (2) (Parsons & Brereton, 2008); Wareham, 17.7 (Davey, 2008). S. HAMPSHIRE [11] Funtley, 16.6 (MLO per TN). N. HAMPSHIRE [12] Greywell, 6.10 (PAB per TN). W. SUSSEX [13] Horsham, 8.10 (SB per CRP). E. SUSSEX [14] Icklesham, August (2) (Hunter, 2008); Northiam, 21.7 (AM per CRP). E. KENT [15] St Margaret's at Cliffe, 2.9 (AJM per NLJ); Newington, 16.7 (PM); New Romney, 5.9 (KRe); Pegwell, 7.9 (FS). SURREY [17] Holmbury St Mary, 20.9 (PLH per GAC). ISLE OF MAN [71] No site(s), June (3) (Scott, 2008c). WATERFORD [H6] Tramore, 30.10 (ABr).

[A series of records of 13 *R. sacraria* from Alderton [25] between 19.5 & 11.8 (A. Aldous per AWP) have been excluded as inconsistent and unsubstantiated.]

1741 *Costaconvexa polygrammata* (Borkh.) Many-lined [I][FR]

S. DEVON [3] Ermington, 12.6 [incorrectly dated as 10.6 in Clancy (2008b)] (RH).

1855a *Eupithecia ultimaria* Boisd. Channel Islands Pug [R][V/I]

E. KENT [15] Lydd-on-sea, 24.5, first VC record (DBe per SPC).

1871 *Lithostege griseata* (D. & S.) Grey Carpet [R][I/V]

E. KENT [15] Dymchurch, 10.6, first VC record (JO).

1891 *Macaria signaria* (Hb.) Dusky Peacock [I][MC]

Records away from the known breeding population in VC15.

E. SUSSEX [14] Horns Cross, Beckley, 7.9 (DNB per SPC).

1894 *Chiasmia clathrata* (L.) Latticed Heath [R][I/V]

Coastal records believed to relate to immigration.

E. KENT [15] Beltinge, 5.9 (48) (BH).

- 1911** *Ennomos autumnaria* (Werneb.) Large Thorn [R][I/V]
Extralimital records or coastal records away from known populations.
S.E. YORKSHIRE [61] Easington, 11.9 (MFS per BRS).
- 1918** *Selenia lunularia* (Hb.) Lunar Thorn [R][I/V]
Coastal records of possible immigrant specimens, the majority of these away from suitable habitat and/or relating to second-brood examples.
E. KENT [15] Lydd, 21.7 (KRe).
- 1937a** *Peribatodes secundaria* (Esper) Feathered Beauty [R][I/V]
Coastal records away from suitable breeding habitat potentially relating to immigrants.
E. KENT [15] Kingsdown, 16.7 (Jarman & Morris, 2008).
- 1945** *Cleorodes lichenaria* (Hufn.) Brussels Lace [R][I]
Extralimital, coastal records likely to involve immigrants.
ISLE OF WIGHT [10] Totland, 18.6, 19.6 (SAK-J, in Clancy, 2008b). E. KENT [15] Greatstone, 23.6 (Clancy, 2008a).
- 1965a** *Pseudocoremia suavis* (Butler) Common Forest Looper [In]
W. CORNWALL [1] Greatwork, 15.4, 14.7, 9.9, 1.10, 12.10, first British records (James, 2008; A. James, pers. comm.); the specimen recorded on 1.10 was identified later than the others and not included in James (2008).

SPHINGIDAE

- 1973** *Acherontia atropos* (L.) Death's-head Hawk-moth [I]
Total no. adults reported: 11 (+ 2 larvae)
By vice-county: 1 (2), 3 (1), 9 (1), 12 (1), 13 (2), 23 (1), 25 (1), 41 (1), 45 (1) + larvae in 14 & H5.
W. CORNWALL [1] Coverack, The Lizard, 22.10 (MW, in Tunmore, 2008); IOS: Abbey Gardens, Tresco, 31.5, found by day (Scott, 2008a). S. DEVON [3] Torquay, 21.8, found dead (L. Brunwin per RFM). DORSET [9] Tolpuddle, 27.6 (Davey, 2008). N. HAMPSHIRE [12] Crawley, 30.9 (RAB). W. SUSSEX [13] Shoreham, 18.8, by day (G. Daintree per THF); Worthing, 13.8 (per CRP). E. SUSSEX [14] Cooksbridge, 22.8, larva (L. Wingrove per CRP). OXFORDSHIRE [23] Northmoor, 4.6 (per T. Merckx, via MCT). E. SUFFOLK [25] Orfordness, 31.8 (J. Askins, MCM per AWP). GLAMORGAN [41] Roath, Cardiff, 12.9 (CLJ, in Gilmore, 2008). PEMBROKESHIRE [45] Skomer Island, 10.9 (Brown, 2008).
E. CORK [H5] Inch, nr. Whitegate, larva in potato field, 4.9 (E. Duhig, in Walsh *et al.*, in press).
- 1986** *Hyles euphorbiae* (L.) Spurge Hawk-moth [I]
E. KENT [15] St Margaret's at Cliffe, 21.6 (Jarman & Morris, 2008).
GLAMORGAN [41] Pontprennau, Cardiff, 5.5, adult found in garden centre, likely to have been an importation (Gilmore, 2008).
- 1987** *Hyles gallii* (Rott.) Bedstraw Hawk-moth [I][R?]
Total no. adults reported: 19
By vice-county: 9 (3), 15 (1), 25 (5), 27 (1), 56 (1), 61 (5), 64 (1), 66 (1), 112 (1).
DORSET [9] Portland Bird Observatory, 30.7, 26.8 (Cade, 2008); Puddletown, 30.7 (HWH). E. KENT [15] New Romney, late August (TR per SJB). E. SUFFOLK [25] Bawdsey, 16.8, 22.8 (Deans, 2008); Framlingham, 16.7 (RAH per AWP); Mendlesham, 23.8, 26.8 (S. Woolnough per AWP). E. NORFOLK [27] Weybourne, 15.8 (MP per DH). NOTTINGHAMSHIRE [56] Rainworth, 16.6 (D. Chadburn per SW). S.E. YORKSHIRE [61] Easington, 22.7, 11.8 (MFS per CHF); Flamborough, 2.8 (R. Baines per CHF); Holmpton, 21.7 (FK per CHF); Spurn, 21.7 (Spence, 2008). MID-W. YORKSHIRE [64] Bellflask, 26.8 (BSM per CHF). DURHAM [66] Souter Lighthouse, 21.7 (P. Hogg *et al.* per TJT). SHETLAND ISLANDS [112] Mid Walls, 11.8 (P. Duncan).
- 1990** *Hyles livornica* (Esp.) Striped Hawk-moth [I]
Total no. reported: 53
By vice-county: 1 (19), 3 (1), 9 (5), 10 (1), 11 (2), 13 (4), 15 (11), 45 (1), 49 (1), 73 (1), H3 (5), H6 (2).
W. CORNWALL [1] Cury, The Lizard, 13.6, 15.6, 16.6 (FTJ); IOS: Longstone, St Mary's, 10.6, 11.6, 13.6, 15.6 (2), 16.6, 21.6, 22.6, 29.6 (MWS); Maenporth, 12.6, 13.6 (2) (Davis, 2008); Nanquidno, 13.6 (3) (CM); Windmill Farm, The Lizard, 12.6 (A. Pay, in Tunmore, 2008). S. DEVON [3] Shaugh Prior, 12.6 (A. Trout per RFM). DORSET [9] Lymington, 16.6 (Davey, 2008); Portland Bird Observatory, 14.6 (Benham, 2007); Puddletown, 20.6 (HWH); West Bexington, 16.6 (Eden, 2008), 27.8 (PHS). ISLE OF WIGHT [10] Totland, 18.6 (Knill-Jones, 2008a). S. HAMPSHIRE [11] Droxford, 5.8 (BP per TN); Funtley, 15.6 (TDC per TN). W. SUSSEX [13] Angmering, 17.6 (R. Poxon); Haywards Heath, 17.6 (MLK per CRP); Kingley Vale

NNR, 11.8 (D. Mercer); Walberton, 15.6 (JTR per CRP). E. KENT [15] Dungeness, 14.6, 17.6, 18.6 (DW *et al.*); Greatstone, 14.6 (BB, JJ); Littlestone, 21.8 (KRe); Lydd-on-sea, 13.6, 14.6 (DBe); New Romney, 16.6 (2) (KRe); Pegwell, 14.6, 21.6 (Solly *et al.*, 2008). PEMBROKESHIRE [45] Skomer Island, 11.6 (Brown, 2008). CAERNARVONSHIRE [49] Llanstumdwy, 17.6 (M. Hammett). KIRCUDBRIGHTSHIRE [73] Craig, nr. New Galloway, 9.6, first VC record (B. Pollinger per JW).

W. CORK [H3] Dursey Island, 11.6, by day [with additional *Hyles* spp. hawk-moths, likely to be this species, on 9.6 & 10.6] (Scott, 2008b); Mizen Head, 16.6 (4), 17.6 (JHC). WATERFORD [H6] Tramore, 11.6, 31.7 (Bryant & Walsh, 2008).

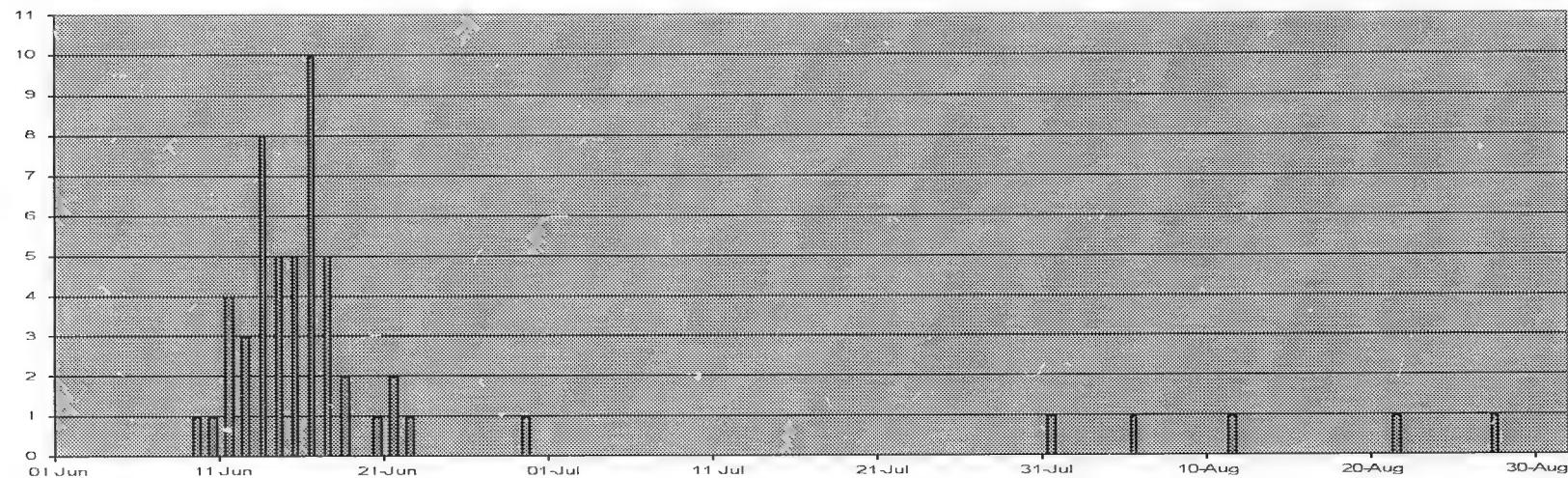


Figure 8. Occurrence times of *Hyles livornica* during 2007.

1993 *Hippotion celerio* (L.) Silver-striped Hawk-moth [I]

E. CORNWALL [2] Looe Island, 1.5, found dead in building, likely to have arrived the previous autumn (C. Lewis per LACT).

2018 *Closteria anachoreta* (D. & S.) Scarce Chocolate-tip [I][FR][MC?]

E. KENT [15] Lydd, 19.7 (KRe); Greatstone, 28.4, 26.7 (JJ); Pegwell, 31.7 (Solly *et al.*, 2008); Ramsgate, 5.8 (Solly *et al.*, 2008); Sandwich, 18.7 (FS).

THAUMETOPOEIDAE

2022 *Thaumetopoea processionea* (L.) Oak Processionary [I][In]

Records only given of probable immigrant males, unassociated with introduced resident populations in the London area.

E. SUSSEX [14] Bexhill, 5.8 (KNA per CRP).

LYMANTRIIDAE

2031 *Leucoma salicis* (L.) White Satin [R][I/V]

Extralimital, coastal records of possible immigrants.

S.E. YORKSHIRE [61] Spurn, 13.7 (BRS). S. NORTHUMBERLAND [67] Tynemouth, 23.7 (Tams, 2008).

2034 *Lymantria dispar* (L.) Gypsy Moth [I][FR][In]

Not including records associated with introduced resident populations in the London area, particularly VC's 21 & 24.

N. HAMPSHIRE [12] Crawley, 13.8 (RAB); Liss, 5.8 (P. Twine per TN).

S. HAMPSHIRE [11] Hengistbury Head, a breeding colony first recorded as larvae in May 2007, likely to be the result of an accidental introduction (per BFS).

ARCTIIDAE

2039 *Atolmis rubricollis* (L.) Red-necked Footman [R][I/V]

A selection of coastal/extralimital records and high coastal counts that may relate to immigrant examples.

E. KENT [15] Kingsgate, 12.6 (FS).

2045 *Eilema caniola* (Hb.) Hoary Footman [R][I/V]

Coastal records considered most likely to relate to immigrant examples.

DORSET [9] West Bexington, 21.8 (Eden, 2008). ISLE OF WIGHT [10] Bonchurch, 26.8 (JH, in Knill-Jones, 2008a). E. SUSSEX [14] Peacehaven, 9.9 (Pratt, 2008). E. KENT [15] Greatstone, 25.8, 31.8 (JJ); Lydd, 7.9 (KRe); Pegwell, 2.8 (Solly *et al.*, 2008)

2051 *Lithosia quadra* (L.) Four-spotted Footman [R][I]

Resident populations occur widely in the New Forest, south-west England, south Wales and southern Ireland, these probably reinforced by immigration. However records from these areas have generally been excluded as their origins are indeterminable and often likely to be associated with local breeding populations.

DORSET [9] Alners Gorse, 4.8 (Davey, 2008); Ashington, 2.10 (Davey, 2008); Charmouth, 6.8 (GS, in Davey, 2008); Durlston, 14.10 (PAD *et al.*); East Holme, 13.10 (Davey, 2008); East Lulworth, 20.6, 2.10, 4.10, 8.10, 11.10 (4), 12.10, 13.10 (5), 14.10 (3), 15.10, 17.10 (Davey, 2008); Hurn, 22.6, 23.6, 1.7, 11.7, 17.7, 19.7, 14.8, 23.9, 8.10 (MJ, in Davey, 2008); Merley, 14.10 (Davey, 2008); Preston, 24.8 (RLa); Puddletown, 29.6 (2), 12.10, 14.10 (3), 15.10, 26.10, 31.10 (HWH); Tolpuddle, 12.10 (Davey, 2008); Verwood, 29.6, 12.7, 3.10 (Davey, 2008); Walditch, 12.7 (2), 14.7, 3.8, 28.9, 1.10 (MSP); West Bexington, 14.10 (RED, in Davey, 2008); Weymouth, 14.7, 3.8, 4.8, 4.10, 16.10, 20.10 (PH); Wyke Regis, 20.7, 5.8 (DF). ISLE OF WIGHT [10] November (1) (Knill-Jones, 2008a); Bonchurch, 24.7, 25.7 (JH). W. SUSSEX [13] Findon, 7.10 (MAS per CRP); Pagham, 10.7 (IL); Walberton, late June (2), 30.9, October (1) (JTR per CRP). E. SUSSEX [14] Barcombe, 11.7 (JCD per CRP); Cooden, 20.6, 21.9, 13.10 (JS per CRP); Crowborough, undated (2) (MJS per CRP); Friston, 2.10 (MB per CRP); Horns Cross, 20.6, 23.6 (DNB per CRP); E. KENT [15] Biddenden, 23.9, 14.10 (SJB); Dumpton, 21.6 (Solly *et al.*, 2008); New Romney, 25.9, 28.9 (SPC); Dungeness, 12.10 (DW). SURREY [17] Holmbury St Mary, 27.7 (PLH per GAC); Purley, 25.7 (PJS per GAC). S. ESSEX [18] Bradwell-on-sea, 14.6, 19.6, 25.7 (Dewick, 2008). E. SUFFOLK [25] Bawdsey, 18.7 (Deans, 2008); Dunwich, 14.10, 15.10 (Moore, 2008). ISLE OF MAN [71] No site(s), June (1), July (2), August (4) (Scott, 2008c).

2067 *Euplagia quadripunctaria* (Poda) Jersey Tiger [R][I/V]

Records away from known resident populations in VC's 2, 3, 9, 10, 16 & 17.

W. CORNWALL [1] Mullion, The Lizard, 4.8 (MTh, in Tunmore, 2008). E. KENT [15] Lydd, 3.8 (EC). BERKSHIRE [22] Reading, 10.8, first VC record (NMH, in Clancy, 2008b). BUCKINGHAMSHIRE [24] Little Frieth, 11.8 (A. & J. Gudge per MVA).

NOCTUIDAE**2090 *Agrotis trux* (Hb.) Crescent Dart [R][I/V]**

E. KENT [15] Greatstone, 22.6, second VC record (JJ per SPC).

2094 *Agrotis crassa* (Hb.) Great Dart [I][FR]

DORSET [9] Portland Bird Observatory, 23.8 (Benham, 2007; MC per PAD). E. KENT [15] Lydd-on-sea, 17.8 (DBe).

2111a *Noctua janthina* ([D. & S.]) Langmaid's Yellow Underwing [I][MC]

Total no. reported: 43

By vice-county: 11 (6), 14 (1), 15 (31), 17 (1), 25 (4).

Almost certainly breeding locally in VC's 15 & 11 and probably elsewhere, all received/sourced records in 2007 are included for interest.

S. HAMPSHIRE [11] Northney, Hayling Island, 8.8, 9.8 (Phillips & Johnson, 2008); Southsea, 1.8, 23.8 (JRL, IRT per TN); West Town, Hayling Island, 20.7, 2.8 (GSAS, in Phillips & Johnson, 2008). E. SUSSEX [14] Wadhurst, 16.7 (AECA). E. KENT [15] Beltinge, 4.8 (BH); Dungeness area, July (8), August (15), September (3) (Clancy, 2008a); Kingsdown, 13.7, 3.8, 5.8 (NLJ); St Margaret's at Cliffe, 17.7 (AJM per NLJ). SURREY [17] Holmbury St Mary, 11.8 (PLH per LJH). E. SUFFOLK [25] Bawdsey, July (1), 5.8 (MJD); Landguard, 26.6, 18.7 (Odin, 2008).

2113 *Spaelotis ravidia* (D. & S.) Stout Dart [R/I/V]

E. NORFOLK [27] Scole, 25.8 (M. Hall per DH).

2137 *Eurois occulta* (L.) Great Brocade [I][R]

Total no. immigrants reported: 145

By vice-county: 3 (2), 5 (1), 6 (2), 9 (5), 11 (4), 12 (4), 13 (1), 15 (1), 18 (1), 23 (5), 24 (1), 25 (3), 26 (2), 27 (4), 34 (3), 36 (4), 38 (21), 48 (1), 49 (1), 50 (2), 58 (6), 61 (20), 62 (6), 63 (4), 64 (21), 65 (6), 66 (2), 67 (10), H38 (1), H39 (1).

The following records are all thought to relate to the pale immigrant form.

S. DEVON [3] Rockbeare, 25.8 (MK per RFM); Tytherleigh, 23.8 (AJ per RFM). S. SOMERSET [5] Broadway, 22.8 (W. Urwin per M. Yeates). N. SOMERSET [6] Langport, 21.8, 23.8 (J. Bebbington per M. Yeates). DORSET [9] Bournemouth, 23.8 (Davey, 2008); Gillingham, 24.8 (GRH, in Davey, 2008); Kingston, 24.8 (P. Benham, in Davey, 2008); Langton Matravers, 27.8 (DCGB); Spetisbury, 25.8 (DJK, in Davey, 2008). S. HAMPSHIRE [11] Ashurst, 22.8 (KG per TN); Eastleigh, 25.8 (SI per TN); North Gorley, 25.8 (PA per TN); Sholing, 26.8 (ARC per TN). N.

HAMPSHIRE [12] Bishops Sutton, 25.8 (PTh per TN); Cholderton Lodge, 25.8 (HE per TN); Crawley, 23.8 (RAB); Leckford, 24.8 (GCE per TN). W. SUSSEX [13] Middleton-on-sea, 25.8 (IDM, in Clancy, 2008b). E. KENT [15] Iwade, 24.8 (IC). S. ESSEX [18] Bradwell-on-sea, 26.8 (Dewick, 2008). OXFORDSHIRE [23] Northmoor, 22.8 (5) (MCT). BUCKINGHAMSHIRE [24] Westcott, 23.8 (DLW per MVA). E. SUFFOLK [25] Bawdsey, 22.8 (Deans, 2008); Eye, 30.8 (PK); Rushmere St Andrew, 24.8 (JBH). W. SUFFOLK [26] Euston, August (2) (SD per AWP). E. NORFOLK [27] Buxton, 23.8 (P. Beckett per DH); Horsford, 22.8 (J. Welton, M. Ottley per DH); Kelling, 31.8 (J. Welton, M. Ottley per DH); Overstrand, 23.8 (G. Bond per DH). W. GLOUCESTERSHIRE [34] Pilning, 23.8, 28.8 (JM per RGG); Stone, 26.8 (P. Taylor per RGG). HEREFORDSHIRE [36] Haugh Woods, 22.8 (4) (R. Hemming). WARWICKSHIRE [38] Bilton, 26.8 (D. Cox per DCGB); Brandon Marsh, 25.8 (D. Woodward per DCGB); Charlecote, 23.8, 24.8 (2), 25.8, 31.8 (DCGB); Earlsdon, 26.8 (S. Howarth per DCGB); Edgbaston, 22.8 (M. Hughes per DCGB); Grendon, 28.8 (DMP per DCGB); Hillmorton, 22.8 (P. Nicholas per DCGB); Lapworth, 28.8 (B. Dunnet per DCGB); Radford, 23.8, 25.8 (M. Vice per DCGB); Solihull, 22.8 (R. Ledbury per DCGB); Temple Grafton, 23.8 (2), 25.8, 26.8 (AFG per DCGB); Warwick, 24.8 (SDT per DCGB), 29.8 (A. Visick per DCGB). MERIONETHSHIRE [48] Tal y bont, 24.8 (Hicks & Bantock, 2008). CAERNARVONSHIRE [49] Clynnog Fawr, Lleyn Peninsula, 28.8 (PMH). DENBIGHSHIRE [50] Llanarmon-yn lal, 23.8, 25.8 (P. Rathbone). CHESHIRE [58] Marbury CP, 23/24.8 (6) (per PMH). S.E. YORKSHIRE [61] Atwick, 23.8 (5), 27.8 (2) (WC per CHF); Cottingham, 25.8 (AA per CHF); Easington, 22.7 (MFS per CHF); Kilnwick, 24.8 (M. Coverdale per CHF); Lund, 23.8, 24.8, 25.8 (M. Coverdale per CHF); Muston, 31.8 (PQW per CHF); Pocklington, 24.8, 30.8 (IA per CHF); Rudston, 25.8 (ASE per CHF); Top Low NR, 27.8 (2) (MGH per CHF); York, 23.8 (D. Chesmore per CHF). N.E. YORKSHIRE [62] Great Ayton, 24.8 (PW per CHF); Great Smeaton, 23.8 (3) (JE per CHF); Grosmont, 25.8 (WN per CHF); Skelton, 24.8 (S. Farish per CHF). S.W. YORKSHIRE [63] Rawcliffe, 25.8 (2) (C. Brett per CHF); Spotborough, 22.8 (D. Booth per CHF); Walsden, 24.8 (B. Leecy per CHF). MID-W. YORKSHIRE [64] Beamsley, 24.8 (2), 25.8 (2), 26.8 (3), 28.8, 30.8 (GAF per CHF); Burley-in-Wharfedale, 24.8 (P. Riley per CHF); Dob Park, 25.8 (2) (CGH per CHF); Knaresborough, 26.8 (S. Root per CHF); Rodley NR, 26.8 (P. Murphy per CHF); Sharow Grange, 23.8, 24.8, 26.8 (2), 28.8 (J. Warwick per CHF); Spotforth, 1.9 (R. Bradshaw per CHF); Staveley NR, 31.8 (CHF *et al.*). N.W. YORKSHIRE [65] Hutton Conyers, 22.8, 23.8 (4) (CHF); Kiplin, nr. Catterick, 26.8 (JE per CHF). DURHAM [66] Framwellgate Moor, 27.8 (T. Barker per K. Regan); Stockton-on-Tees, 27.8 (J. Duffie per K. Regan). S. NORTHUMBERLAND [67] Kielder, 24.8 (D. Kipling per K. Regan); Tynemouth, 25.8 (2), 29.8, 30.8 (5), 31.8 (Tams, 2008; K. Regan).

DOWN [H38] Helen's Bay, 21.8 (T. Boyd, in Walsh *et al.*, in press). ANTRIM [H39] Lisburn, 21.8 (E. Rolston, in Walsh *et al.*, in press).

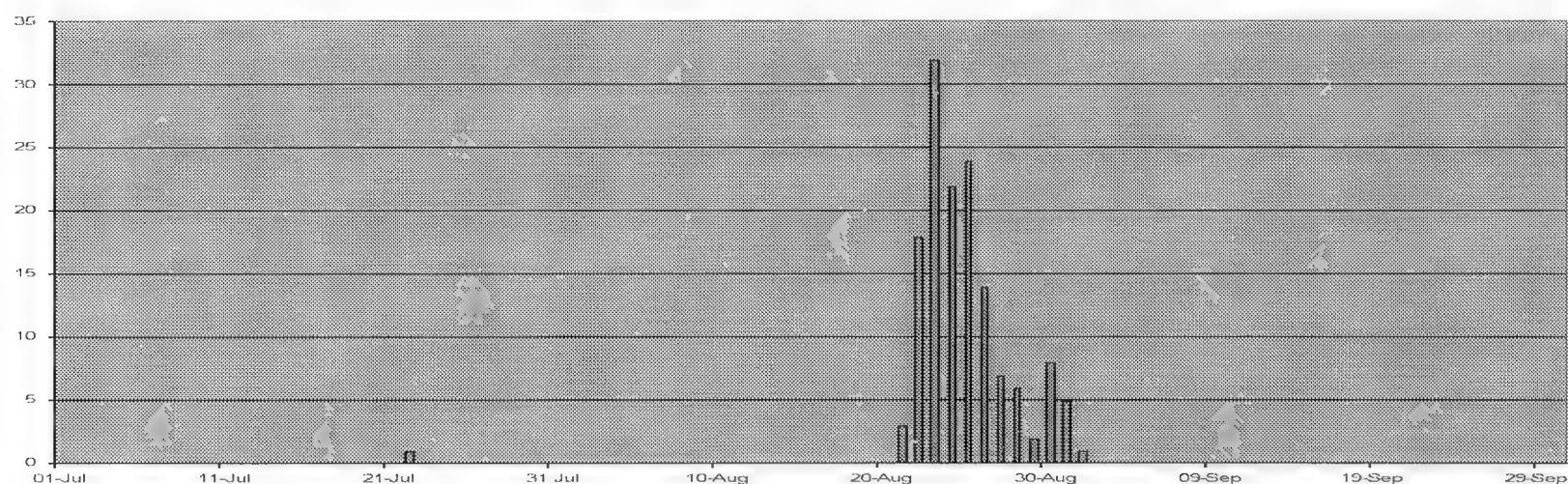


Figure 9. Occurrence times of immigrant *Eurois occulta* during 2007 (dated records).

2145 *Discestra trifolii* (Hufn.) Nutmeg [R][I/V]

Extralimital records of potential immigrants.

DOWN [H38] Greencastle, Carlingford Lough, 28.8 (P. Archdale, in Walsh *et al.*, in press).

2160a *Lacanobia splendens* (Hb.) Splendid Brocade [I]

E. KENT [15] Pegwell, 17.5 (Solly *et al.*, 2008).

2183 *Orthosia miniosa* (D. & S.) Blossom Underwing [R][I/V]

Coastal or extralimital records that may relate to immigrants.

W. SUSSEX [13] Pagham, 5.4 (IL). E. SUFFOLK [25] Bawdsey, 22.4 (Deans, 2008).

2194 *Mythimna albipuncta* (D. & S.) White-point [R][I/V]

An established resident within the southern and eastern seaboard counties between VC's **3** & **28**, and inland to include VC's **12**, **16**, **17** & **26**; records are only listed from outside this area.
 BERKSHIRE [22] Wokingham, 23.9 (RH). BUCKINGHAMSHIRE [24] Chorleywood, 28.9 (R. Ellis per MVA); Melton, 25.8 (MVA). S.E. YORKSHIRE [61] Kilnsea, 5.10 (BRS per CHF).

2202 *Mythimna l-album* (L.) L-album Wainscot [R][I/V]

An established resident within the southern seaboard counties between VC's **1** & **25**, and records are only listed from outside this area.
 SURREY [17] Mickleham, 22.6 (C. McGaw per GAC); Worcester Park, 3.6 (LdeW per GAC). GLAMORGAN [41] Overton, Gower, 10.9 (2 at ivy) (B. Stewart, in Gilmore, 2008).

2208 *Mythimna loreyi* (Dup.) Cosmopolitan [I]

W. CORNWALL [1] IOS: Longstone, St Mary's, 16.8 (MWS); Sancreed, 3.8 (D. Flumm per APJ). [An unconfirmed record from West Stowford [4] on 26.10 (M. Braid per RFM).]

2223 *Calophasia lunula* (Hufn.) Toadflax Brocade [R][V/I]

A localised resident in the southern seaboard counties between VC's **13** & **25**, and VC's **16** & **21**; records from these VC's are excluded as they are likely to originate from breeding populations.
 S.E. YORKSHIRE [61] Spurn, 25.4, first VC record (Spence, 2008).

2226 *Leucochlaena oditis* (Hb.) Beautiful Gothic [R][I/V]

W. CORNWALL [1] Maenporth, 3.10 (Davis, 2008).

2238 *Lithophane furcifera* (Hufn.) Conformist [I][FR]

S. NORTHUMBERLAND [67] Seaton Sluice, 16.4, of the immigrant race *furcifera*, first VC record (JPa).

2241 *Xylena vetusta* (Hb.) Red Sword-grass [R][I][V]

Records of a potentially immigrant origin.

W. CORNWALL [1] Goonhilly, The Lizard, 15.4 (MTh, in Tunmore, 2008). E. CORNWALL [2] Callington, 1.2 (W. Birkett per APJ). DORSET [9] Lyme Regis, 5.4 (Davey, 2008); Studland, 23.5 (Davey, 2008). ISLE OF WIGHT [10] Totland, 15.4 (SAK-J, in Clancy, 2008b). W. NORFOLK [28] Holme, 4.4 (PTi per DH).

2251 *Trigonophora flammea* (Esp.) Flame Brocade [I][FR]

DORSET [9] Durlston, 14.10 (PAD); Portland Bird Observatory, 30.10 (Cade, 2008); Weymouth, 26.10 (RLa), 27.10 (PH). ISLE OF WIGHT [10] Bonchurch, 27.11 (JH); Totland, 3.11 (Knill-Jones, 2008a). S. HAMPSHIRE [11] Sandy Point, Hayling Island, 25.10 (Phillips & Johnson, 2008). E. KENT [15] Dungeness, 25.10 (KRe).

2275 *Xanthia gilvago* (D. & S.) Dusky-lemon Sallow [R][V/I]

Coastal records of wandering adults away from suitable breeding habitat that may be the result of immigration.

E. KENT [15] Dungeness, 11.10 (DW). DORSET [9] Burton, 30.9 (Davey, 2008); West Bexington, 2.10 (Eden, 2008).

2276 *Xanthia ocellaris* (Borkh.) Pale-lemon Sallow [R][I][V]

Extralimital/coastal records that may relate to immigrant examples.

DORSET [9] Weymouth, 8.10 (PH). E. SUFFOLK [25] Landguard, 5.10 (Odin, 2008).

2290 *Simyra albovenosa* (Goeze) Reed Dagger [R][I/V]

Extralimital, coastal records that may refer to immigrants.

S. HAMPSHIRE [11] Hengistbury Head, 1.8 (MJ, in Davey, 2008).

2292 *Cryphia algae* (Fab.) Tree-lichen Beauty [I][MC]

Records listed exclude those clearly associated with the established resident populations in VC's **16**, **17**, **18** & **21**; although a number of records listed are more likely to relate to internal range spread rather than primary immigration.

ISLE OF WIGHT [10] Bonchurch, 23.8 (JH). S. HAMPSHIRE [11] Mengham, Hayling Island, 30.8 (SW, in Phillips & Johnson, 2008); Sandy Point, Hayling Island, 1.9, 3.9 (Phillips & Johnson, 2008). W. SUSSEX [13] Ferring, 4.8 (SMG per CRP); Walberton, 29.8 (JTR per CRP). E. SUSSEX [14] Bexhill, 11.8 (JS), 12.8 – 8.9 (5) (KNA per CRP). E. KENT [15] Dungeness, 4.8 (PGA); Greatstone, 5.8 (BB); Hythe Ranges, 11.8 (TS per LJH); Isle of Thanet, July (1), August (23), September (2) (Solly *et al.*, 2008); Kingsdown, 5.8 (NLJ); Littlestone, 13.8, 24.8 (KRe); Lydd, 5.8 (KRe). S. ESSEX [18] Bradwell-on-sea, 25.7 – 26.8 (12, inc. 4 on 5.8) (Dewick, 2008). N. ESSEX [19] Brightlingsea, 11.8 (D. Scott per LJH). E. SUFFOLK [25] Bawdsey, 13.7 (2), 3.8 (2), 5.8, 11.8, 12.8 (2), 13.8 (MJD, NM per AWP); Ipswich, 5.8 (NS per AWP); Landguard, 4.8, 7.8, 8.8, 10.8 (MCM, NO per AWP). BEDFORDSHIRE [30] Barton Hills NNR, 11.8, first VC record (AMB).

- 2304 *Trachea atriplicis* (L.) Orache Moth [I][FR]**
ISLE OF WIGHT [10] Cranmore, 24.7 (ICF, in Knill-Jones, 2008a). S. ESSEX [18] Bradwell-on-sea, 6.7 (Dewick, 2008).
- 2097a *Actinotia hyperici* (D. & S.) Pale-shouldered Cloud [I]**
E. KENT [15] Folkestone, 14.7 (PS, in Clancy, 2008b). MIDDLESEX [21] Wembley, 22.5, first VC record (Geiger, 2007).
- 2309 *Methorasa latreillei* (Dup.) Latreille's Latin [I][In?]**
AT SEA: An adult found alive aboard a ship within Irish waters in the Atlantic (TBr, NLJ *et al.*); the moth was not seen to arrive and may have been transported on the boat which had travelled north from the Mediterranean and the Bay of Biscay.
- 2313 *Enargia paleacea* (Esp.) Angle-striped Sallow [R][I]**
Extralimital records of probable immigrants.
DORSET [9] West Bexington, 24.8 (Eden, 2008).
- 2376 *Sedina buettneri* (Her.) Blair's Wainscot [R][I]**
Records away from resident populations in VC9.
DORSET [9] Ringstead Bay, nr. Weymouth, 14.10 (RAB). ISLE OF WIGHT [10] Totland, 12.10 (Knill-Jones, 2008a). E. SUFFOLK [25] Dunwich, 16.10, second VC record (DCGB).
- 2385 *Spodoptera exigua* (Hb.) Small Mottled Willow [I]**
Total no. reported: 18
By vice-county: 1 (4), 3 (1), 5 (2), 11 (1), 13 (1), 14 (2), 15 (1), 17 (1), 18 (1), 25 (1), 63 (1), 41 (1), H6 (1).
W. CORNWALL [1] Falmouth, 12.6 (JBC per APJ); IOS: Longstone, St Mary's, 10.6, 10.8 (MWS); Penzance, 28.4 (LO per APJ). S. DEVON [3] Woodbury Salterton, 12.9 (MM per RFM). S. SOMERSET [5] Harwood, 8.8 (P. Tennant per M. Yeates); Merriott, 6.10 (R. Clatworthy per M. Yeates). S. HAMPSHIRE [11] Sandy Point, Hayling Island, 11.8 (JRL *et al.* per LJH). W. SUSSEX [13] Pagham, 2.6 (IL). E. SUSSEX [14] Icklesham, September (1) (Hunter, 2008); Peacehaven, 22.7 (Pratt, 2008). E. KENT [15] Lydd, 7.9 (CT). SURREY [17] Holmbury St Mary, 19.6 (PLH per GAC). S. ESSEX [18] Bradwell-on-sea, 26.7 (Dewick, 2008). E. SUFFOLK [25] Brantham, undated (R. Leavett per AWP). S.W. YORKSHIRE [63] West Melton, 7.6 (HEB per CHF). GLAMORGAN [41] Cwm Ivy, Gower, 14.6 (VS, in Gilmore, 2008). WATERFORD [H6] Tramore, 12.6 (ABr, in Walsh *et al.*, in press).
- 2386 *Spodoptera littoralis* (Boisd.) Mediterranean Brocade [In][I]**
SURREY [17] Barnes, 22.6 (MRH, in Clancy, 2008b).
- 2387a *Platyperigea kadenii* (Frey.) Clancy's Rustic [MC][I]**
Records from the southern and eastern seaboard counties between VC's 3 & 25 have been excluded from the current report as these are thought to be mainly associated with recently established resident populations.
W. CORNWALL [1] Coverack, The Lizard, 11.10 (P. Robbins, in Tunmore, 2008); IOS: St Mary's, 1-19.10 (9), first Scillies records (Scott, 2008a); Maenporth, 2.10 (Davis, 2008). E. CORNWALL [2] Downderry, 3.10, 25.11 (SCM per LACT); Torpoint, 29.5 (LACT).
- 2392a *Proxenus hospes* (Frey.) Porter's Rustic [I]**
Total no. reported: 24
By vice-county: 1 (3), 3 (1), 9 (7), 10 (2), 13 (1), 15 (8), 25 (2).
W. CORNWALL [1] IOS: Longstone, St Mary's, 12.8 (2), 2.10 (Scott, 2008a). S. DEVON [3] Uplyme, 5.8 (AK). DORSET [9] Portland Bird Observatory, 7.8, 10.8 (Cade, 2008); Puddletown, 4.8, 5.8 (HWH); West Bexington, 4.8, 5.8, 14.8 (Eden, 2008). ISLE OF WIGHT [10] Bonchurch, 13.8, 3.10 (JH, in Knill-Jones, 2008a). W. SUSSEX [13] Pagham, 7.9 (IL). E. KENT [15] Dymchurch, 16.8, 23.8 (2), 24.8 (JO); Greatstone, 24.7, 16.8 (BB); Littlestone, 23.8 (KRe); Lydd, 20.8 (KRe). E. SUFFOLK [25] Bawdsey, 9.8, 21.8 (Deans, 2008).
- 2396a *Galgula partita* (Guen.) Wedgeling [In]**
GLAMORGAN [41] Margam, May, adult found in a package imported from Kentucky, U.S.A.; first UK record (C. Gittins, in Gilmore, 2008).
- 2400 *Helicoverpa armigera* (Hb.) Scarce Bordered Straw [I][In]**
Total no. reported: 49
By vice-county: 1 (13), 2 (3), 9 (12), 10 (3), 11 (1), 13 (1), 14 (3), 15 (9), 25 (2), H6 (2).
W. CORNWALL [1] Falmouth, 12.10 (JBC per APJ); IOS: Longstone, St Mary's, 24.6, 28.6, 12.8 (MWS); Maenporth, 15.10 (GD per APJ); Penzance, 5.10, 6.10 (JF per APJ); The Lizard, October

(5), November (1) (Tunmore, 2008) inc. Cury, 4.10 (FTJ). E. CORNWALL [2] Downderry, 4.10, 6.10 (SCM per LACT); Veryan, 1.10 (PK per APJ). DORSET [9] Beaminster, 3.10 (S. Philp, in Davey, 2008); Charmouth, 4.10 (2) (GS, in Davey, 2008); Durlston; 3.10 (DCGB); Portland Bird Observatory, October (2), November (1) (Cade, 2008); Puddletown, 21.6, 30.9 (HWH); West Bexington, 2.10, 6.10, 12.10 (REd, in Davey, 2008). ISLE OF WIGHT [10] Bonchurch, 9.10, 11.10, 13.10 (JH). S. HAMPSHIRE [11] Sandy Point, Hayling Island, 1.10 (AJo per TN). W. SUSSEX [13] Chichester, 20.9 (MCP per CRP). E. SUSSEX [14] Bexhill, 10.10 (KNA per CRP); Northiam, undated (AM per CRP); Wadhurst, 3.10 (AECA per CRP). E. KENT [15] Dymchurch, 26.7 (JO); Greatstone, 5.10, 7.10 (BB); Lydd-on-sea, 17.10 (2) (RCI, PTr); New Romney, 4.8 (KRe); Pegwell, 17.7, 2.11 (FS); St Margaret's at Cliffe, 27.7 (AJM per NLJ). E. SUFFOLK [25] Bawdsey, 29.9 (MJD); Dunwich, 15.10 (JHC).

WATERFORD [H6] Tramore, 21.6, 23.10 (ABr, in Walsh *et al.*, in press).

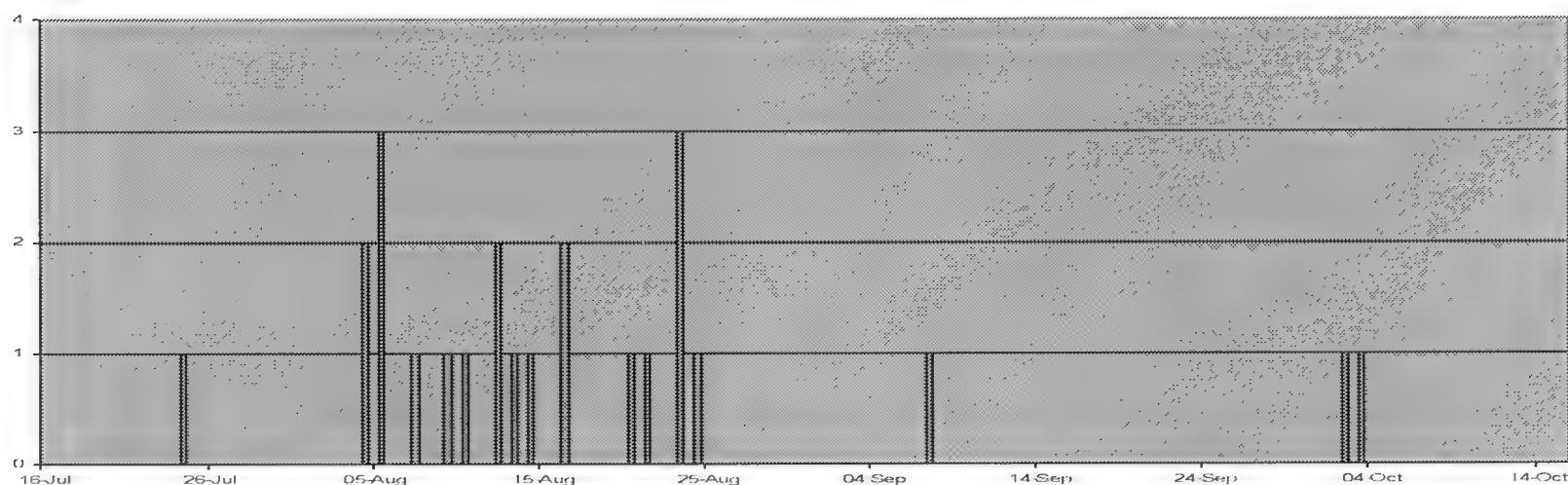


Figure 10. Occurrence times of *Proxenus hospes* during 2007.

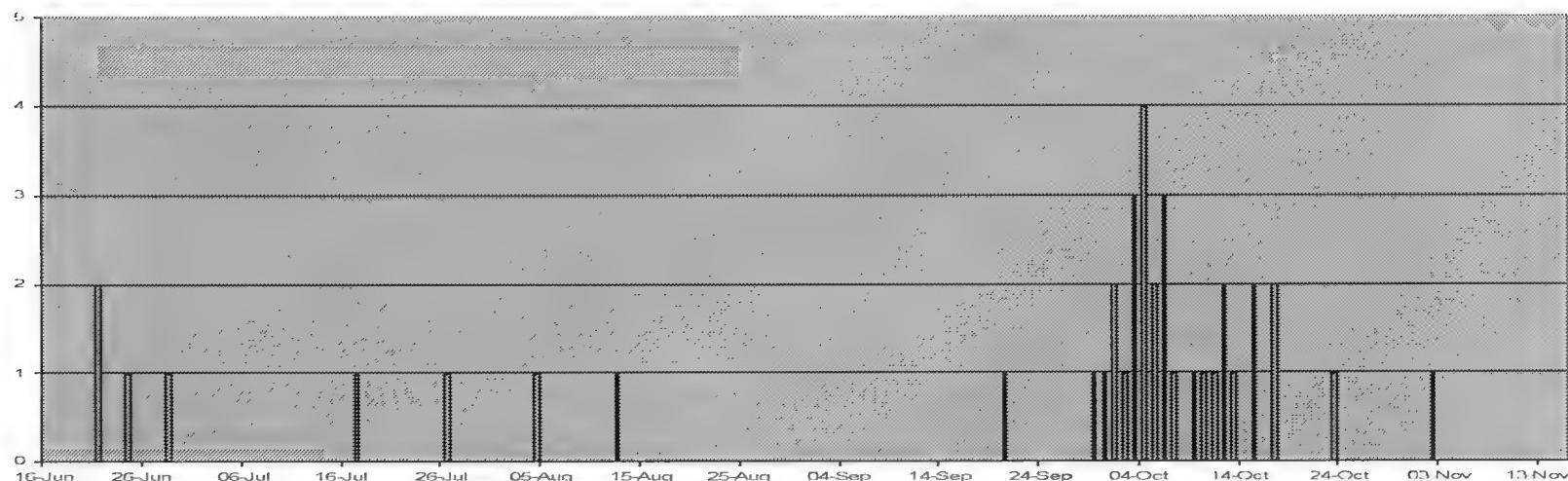


Figure 11. Occurrence times of *Helicoverpa armigera* during 2007 (dated records).

2403 *Heliothis peltigera* (D. & S.) Bordered Straw [I]

Total no. reported: 51

By vice-county: 1 (16), 2 (1), 5 (2), 9 (5), 11 (3), 14 (4), 15 (9), 18 (1), 24 (2), 25 (1), 38 (1), 45 (1), 96 (1), H3 (3), H6 (1).

W. CORNWALL [1] IOS: Longstone, St Mary's, 12.6 (3), 13.6 (4), 26.6, 28.6 (MWS); Maenporth, June (2) (Davis, 2008); Nanquidno, 13.6 (CM); The Lizard, June (3), July (1) (Tunmore, 2008) inc. Mullion, 22.6, 26.7 (MTh per APJ). E. CORNWALL [2] Downderry, 4.9 (JCN per LACT). S. SOMERSET [5] Yeovil, 2.6, 3.6 (J. Day per M. Yeates). DORSET [9] Charmouth, 19.6 (GS, in Davey, 2008); West Bexington, 18.6, 24.6 (REd, in Davey, 2008); Weymouth, 20.6 (PH); Wyke Regis, 18.6 (DF, in Davey, 2008). S. HAMPSHIRE [11] Chilling, 15.6 (2) (PMP per TN); Fareham, 17.6 (KW per TN). E. SUSSEX [14] Ditchling Beacon, 25.8 (T. Beecher per CRP); Icklesham, August (1), September (1) (Hunter, 2008); Rye, August (1) (PBo per CRP). E. KENT [15] Dungeness, 23.6, 26.6 (DW, KRe); Greatstone, 19.6 (JJo); Lydd, 2.7 (KRe); Lydd-on-sea, 19.6, 15.7 (DBe); Newington, 7.5 (PM); New Romney, 9.7 (SPC); St Margaret's at Cliffe, 18.6 (AJM per NLJ). S. ESSEX [18] Pitsea, 11.8 (AJS per LJH). BUCKINGHAMSHIRE [24] Little Malow, undated, found dead (MVA); Longwick, 22.6 (A. Kershaw per MVA). E. SUFFOLK [25] Landguard, 22.6 (MCM, NO per AWP). WARWICKSHIRE [38] Rugby, 5.6 (IGMR per DCGB). PEMBROKESHIRE [45] Skomer Island, June (1) (Brown, 2008). E. INVERNESS-SHIRE [96] Insh, 30.7 (R. Labbett per JW).

W. CORK [H3] Mizen Head, 16.6 (2), 17.6 (JHC). WATERFORD [H6] Tramore, 12.6 (ABr, in Walsh *et al.*, in press).

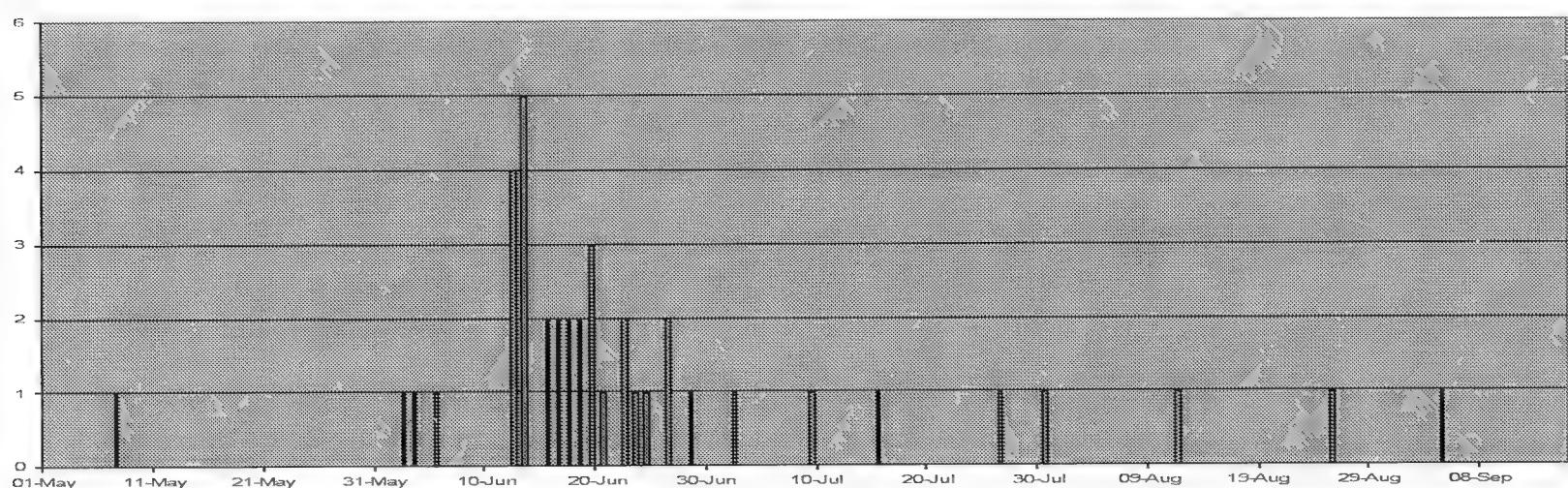


Figure 12. Occurrence times of *Heliothis peltigera* during 2007 (dated records).

2407 *Eublemma ostrina* (Hb.) Purple Marbled [I]

W. SUSSEX [13] Pagham, 28.4 (IL).

2413 *Deltote bankiana* (Fab.) Silver Barred [R][I/V]

Coastal records away from known populations.

E. KENT [15] Kingsdown, 11.6, 4.8 (Jarman & Morris, 2008); St Margaret's at Cliffe, 20.6, 21.6 (Jarman & Morris, 2008).

W. CORK [H3] Glengariff, 15.6 (JHC, in Clancy, 2008b).

2428 *Chrysodeixis chalcites* (Esp.) Golden Twin-spot [I][In]

ISLE OF WIGHT [10] Bonchurch, 29.10 (JH, in Knill-Jones, 2008a). E. KENT [15] Dungeness, 1.9, 11.10 (DW, KRe); Lydd, 6.10 (CT); Pegwell, 8.9 (Solly *et al.*, 2008). E. SUFFOLK [25] Landguard, 2.10 (Odin, 2008). MID-W. YORKSHIRE [64] Bellflask, 3.11, first VC record (BSM per CHF).

2430 *Ctenoplusia limbirena* (Guen.) Scar Bank Gem [I]

DORSET [9] Portland Bird Observatory, 24.8 [incorrectly dated as 25.8 in Cade (2008)] (MC per BFS).

2432 *Trichoplusia ni* (Hb.) Ni Moth [I]

DORSET [9] Dorchester, 28.8 (J. Down, in Davey, 2008).

[An unconfirmed record from Stowford, nr. Chittlehampton [4] on 9.6 (M. Braid per RFM).]

2433 *Trysanoplusia orichalcea* (Frey.) Slender Burnished Brass [I][In]

DORSET [9] Portland Bird Observatory, 14.7 (Cade, 2008).

2436 *Macdunnoughia confusa* (Steph.) Dewick's Plusia [I][In]

Total no. reported: 34

By vice-county: 1 (10), 11 (1), 12 (1), 13 (8), 14 (3), 15 (8), 17 (1), 18 (1), 70 (1).

W. CORNWALL [1] IOS: Longstone, St Mary's, 30.9, 1.10, 11.10, 12.10, 13.10, 28.10 (Scott, 2008a); IOS: St Agnes, 11.10 (Scott, 2008a); IOS: St Mary's, 13.10 (Scott, 2008a); Maenporth, 3.10, 7.10 (Davis, 2008). S. HAMPSHIRE [11] Langstone, 15.10 (JN, in Phillips & Johnson, 2008). N. HAMPSHIRE [12] Crawley, 21.9 (RAB). W. SUSSEX [13] Chichester, 10.9 (MCP per CRP); Goring-by-sea, 1.11 (JHC); Pagham, 14.4, 9.8, 15.9, 16.9, 2.10 (IL); Walberton, 21.9 (JTR). E. SUSSEX [14] Icklesham, 2.11 (Hunter, 2008); Northiam, 13.7 (AM per CRP); Wadhurst, 1.11 (AECA per CRP). E. KENT [15] Biddenden, 27.9 (SJB); Dymchurch, 14.9 (JO); Greatstone, 9.9 (BB); Kingsdown, 3.11 (Jarman & Morris, 2008); Littlestone, 7.10 (KRe); Lydd, 12.9 (KRe); Lydd-on-sea, 30.9 (DBe); New Romney, 19.7 (SPC). SURREY [17] Mitcham Common, 19.5 (DAC). S. ESSEX [18] Bradwell-on-sea, 27.9 (Dewick, 2008). CUMBERLAND [70] Milton, Brampton, nr. Carlisle, 30.8, first VC record (GN).

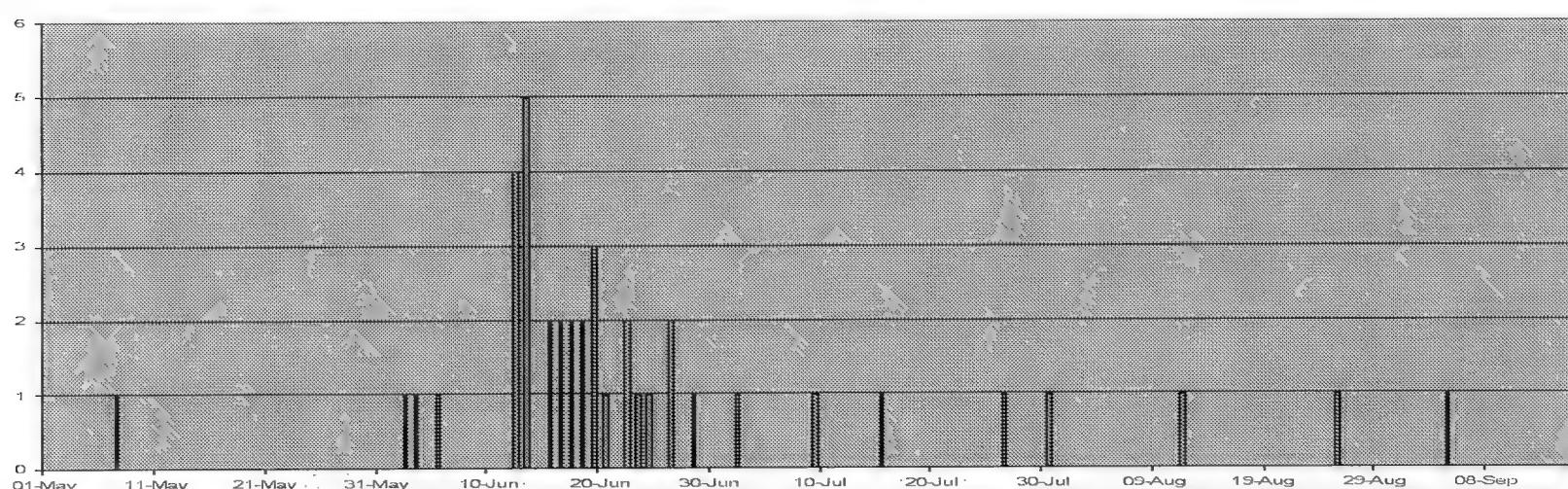


Figure 13. Occurrence times of *Macdunnoughia confusa* during 2007.

- 2437 *Polychrysia moneta* (Hübn.) Golden Plusia [R][I/V]**
 Coastal records that may relate to primary immigration.
 S. HAMPSHIRE [11] Northney, Hayling Island, 6.9 (Phillips & Johnson, 2008).
- 2447 *Symploca interrogationis* (L.) Scarce Silver Y [R][I]**
 The following records are thought to relate to the plumbeous-grey immigrant form.
 N. HAMPSHIRE [12] Whitehill and Bordon, 23.8 (M. Wearing per TN). E. SUFFOLK [25] Eye, 23.8 (PK). WARWICKSHIRE [38] Charlecote, 22.8 (DCGB).
- 2451 *Catocala fraxini* (L.) Clifden Nonpareil [I][FR]**
Total no. reported: 11
 By vice-county: **1 (1), 3 (1), 9 (3), 10 (2), 11 (1), 14 (2), 64 (1)**.
 W. CORNWALL [1] Maenporth, 2.10 (Davis, 2008). S. DEVON [3] Uplyme, 13.10 (AK). DORSET [9] East Holme, 1.10 (J. Cox, in Davey, 2008); Puddletown, 7.9, 20.9 (HWH). ISLE OF WIGHT [10] Bonchurch, 25.9 (JH, in Knill-Jones, 2008a); Totland, 6.10 (Knill-Jones, 2008a). S. HAMPSHIRE [11] South Brockenhurst, 19.9 (RBW per TN). E. SUSSEX [14] Icklesham, 22.9 (Hunter, 2008); Peasmarsh, 15.9 (MFB per CRP). MID-W. YORKSHIRE [64] Bishop Monkton, 8.9, first VC record (DDB per CHF).
- 2455 *Catocala sponsa* (L.) Dark Crimson Underwing [R][I]**
 E. SUSSEX [14] Bexhill, 11.8 (JS per CRP). E. SUFFOLK [25] Dunwich Heath, 13.8, first modern VC record (Moore, 2008).
- 2455a *Catocala nymphagoga* (Esp.) Oak Yellow Underwing [I]**
 SURREY [17] Carshalton, 15.7, first VC record (DAC).
- 2456 *Minucia lunaris* (D. & S.) Lunar Double-stripe [I][FR]**
 E. KENT [15] New Romney, 11.5 (KRe).
- 2460 *Dysgonia algira* (L.) Passenger [I]**
 S. DEVON [3] West Hill, 2.9, first VC record (PJB, in McCormick, 2008b).
- 2464 *Catephia alchymista* (D. & S.) Alchymist [I]**
 E. SUSSEX [14] Bexhill, 8.5 (JS); from the same site as the record of this species in 2006 (see Clancy, 2008c).
- 2475 *Parascotia fuliginaria* (L.) Waved Black [R][I/V]**
 Coastal/extralimital records of possible immigrant examples.
 S. DEVON [3] Exwick, Exeter, 23.6, second VC record (AC, in McCormick, 2008b). DORSET [9] Verwood, 12.7 (Davey, 2008). E. SUFFOLK [25] Hollesley, 11.7 (Deans, 2008).
- 2478 *Hypena obsitalis* (Hb.) Bloxworth Snout [R][V/I]**
 Records outside the known breeding range in VC's **3 & 9**; likely to relate to immigration, internal dispersal or undetected breeding colonies.
 ISLE OF WIGHT [10] Totland, 28.8 (SAK-J, in Clancy, 2008b). E. KENT [15] Hythe, 1.11, second VC record (IR).
- 2488a *Pechipogo plumigeralis* (Hb.) Plumed fan-foot [I][MC]**
 E. KENT [15] Beltinge, 14.7 (BH per SPC); Littlestone, 17.7, 4.8 (KRe); Pegwell, 7.8, 23.8 (FS). MIDDLESEX [21] Buckingham Palace gardens, 4.6, 14.6, 17.7, 12.9, likely to relate to local breeding (THF).

ANNEX 2: SELECTED RECORDS OF COMMONER MIGRANT SPECIES IN 2007

Numerical summaries are not provided for the migrant butterfly species listed in Annex 2, or for *Autographa gamma*, due to the generalised, non-specific nature (or absence) of reports of these species from many sites. Significant records, site totals and general comments have been given for these species, and county summaries of the diurnal records of the migrant butterflies and *Macroglossum stellatarum* are provided where these have been made available in spreadsheet

format. The overall totals and numbers given in the tables for species often recorded diurnally such as *Plutella xylostella* and *Nomophila noctuella* refer to light-trap records, as only records of this nature were recorded and reported systematically. However, figures provided for *Macroglossum stellatarum* represent all reported records, with date-specific light-trap records also listed separately elsewhere in the account for this species.

It has also not been possible to allocate months of occurrence to all the records of nocturnal Annex 2 species reported. It is therefore the case that the total given for the number of reported records is based on the figures given in the distributional table, this generally being greater than the sum of the monthly totals given within the lower table. Only records of adults are included in the tables and numerical totals and, whilst it is likely that these will not be comprehensive for the commoner species, the geographical and chronological occurrence patterns presented should closely reflect the overall picture for each species.

Key to the symbols used within the distribution tables:

SW	South-west England (VC's 1-4).
CS	Central southern England (coastal) (VC's 5, 6, 9-11, 13).
SE	South-east England (coastal) (VC's 14-16, 18, 19).
EA	East Anglia & Lincolnshire (VC's 25-28, 53, 54).
SI	Southern England (inland) (VC's 7, 8, 12, 17, 20-24, 29-34).
W	Wales (VC's 35, 41-52).
CE	Central England (inland) (VC's 36-40, 53-58).
NE	North-east England (VC's 61, 62, 66-68).
NW	North-west England & the Isle of Man (VC's 59, 60, 63-65, 69-71).
S	Scotland (VC's 72-112).
I	Ireland (VC's H1-H40).

YPONOMEUTIDAE

0464 *Plutella xylostella* (L.) [R][I]

Total no. reported (light-trap records only): 12075

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
673	1306	6036	1653	266	104	5	1671	151	1	189

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	2	48	892	7780	1023	633	119	342	43	4

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 525 (Scott, 2008a). DORSET [9] Portland Bird Observatory - 401 (Cade, 2008). E. KENT [15] Dungeness area – 439 at three sites (Clancy, 2008a); Isle of Thanet – 4080 at five sites (Solly *et al.*, 2008); Kingsdown Beach & St Margaret's at Cliffe – 417 at two sites (Jarman & Morris, 2008). E. SUFFOLK [25] Bawdsey – 412 (Deans, 2008); Landguard – 786 (Odin, 2008). S.E. YORKSHIRE [61] Spurn area – 500 (BRS per CHF). S. NORTHUMBERLAND [67] Tynemouth – 793 (TJT per K. Regan).

Ealiest dates: E. KENT [15] Isle of Thanet, January (1) (Solly *et al.*, 2008).

Latest dates: W. CORNWALL [1] IOS: Longstone, St Mary's, December (3) (Scott, 2008a). S.W. YORKSHIRE [63] Pontefract, 6.12 (JWC per CHF). N.W. YORKSHIRE [65] Hutton Conyers, 29.11 (CHF).

Large single night counts: W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6 (115) (MWS). E. KENT [15] Dymchurch, 5/6.6 (1000+) (JO); Lydd-on-sea, 8.6 (112) (DBe). S.E. YORKSHIRE [61] Spurn/Kilnsea, 5.6 (118), 7.6 (101) (BRS per CHF). S. NORTHUMBERLAND [67] Tynemouth, 7.6 (582) (TJT per K. Regan).

Large diurnal counts: S.E. YORKSHIRE [61] Flamborough, 9.6 (164), 10.6 (120) (IM per CHF). N.E. YORKSHIRE [62] Skelton, 8.6 (261), at two sites (DM per CHF). S. ABERDEENSHIRE [92] Blackdog, 8-10.6, 'hundreds disturbed by day' (NL). E. CORK [H5] Ballycotton, 9.6 (100+ at dusk) (SPC, PDC, JMc).

Most northerly records: E. INVERNESS-SHIRE [96] Insh, 21.5 (P. Wheeler per JW).

PYRALIDAE

1395 *Udea ferrugalis* (Hb.) [I][MC]

Total no. reported:

Distribution of records: 16380

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
11469	2536	1726	391	34	70	1	9	16	-	128

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	14	8	213	354	449	1462	2835	1785	6971	1955	81

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 10471 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 1079 (Cade, 2008). E. KENT [15] Dungeness area – 678 at twelve sites (Clancy, 2008a).

Ealiest dates: W. CORNWALL [1] Falmouth, 4.1 (JBC per APJ); IOS: Longstone, St Mary's, 15.1 (MWS). DORSET [9] West Bexington, January (1) (Eden, 2008).

Latest dates: W. CORNWALL [1] IOS: Longstone, St Mary's, 30.12 (4) (MWS).

Large single night counts: W. CORNWALL [1] IOS: Longstone, St Mary's, 13.8 (142), 7.10 (297), 11.10 (458), 12.10 (393), 13.10 (322), 14.10 (334), 4.11 (365), 25.11 (137) (MWS).

Most northerly records: N.E. YORKSHIRE [62] Great Smeaton, 1.11 (JE per CHF). N.W. YORKSHIRE [65] Hutton Conyers, 4.11 (CHF).

Selected inland VC records/summaries: SURREY [17] Lingfield, 26.10 (KEN per GAC); Send, 22.7 (AVK per GAC); South Croydon, 1.9 (GAC). BUCKINGHAMSHIRE [24] VC date range: 13.6 – 22.9; VC total: 5 (per MVA). HUNTINGDONSHIRE [31] VC date range: 8.6, 5.8 – 25.10; VC total: 15+ (per BD). MONTGOMERYSHIRE [47] Commins Coch, 1.11 – 7.11 (7) (PRW). MID-W. YORKSHIRE [64] Bellflask, 4.11 (BSM per CHF); Ellington Banks, 31.10 (CHF *et al.*); Leeds, 28.10 (J. Walshe per CHF). N.W. YORKSHIRE [65] Hutton Conyers, 4.11 (CHF).

1398 *Nomophila noctuella* (D. & S.) [I]

Total no. reported (light-trap records only): 2466

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
1698	237	268	115	25	35	-	19	7	1	61

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2	-	-	-	13	459	310	717	248	623	39	-

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 1548 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 81 (Cade, 2008). E. KENT [15] Dungeness area – 101 at twelve sites (Clancy, 2008a).

Ealiest dates: W. CORNWALL [1] Church Cove, The Lizard, 6.1, 9.1 (Tunmore, 2008).



SOCIETY MATTERS

We are pleased to announce that the AES has recently been recognised by two major UK institutions.

Firstly, **Dr David Lonsdale** (AES Conservation Secretary) has been awarded the prestigious Marsh Award for Insect Conservation by the Royal Entomological Society. David received his award at the RES annual meeting and international symposium in Sheffield during the summer.

Secondly, **Dr Kieren Pitts**, our Webmaster, has been notified that the AES Website has been selected as one of the best wildlife websites in Britain by BBC Countryfile Magazine. Our website was praised for the way it explains biodiversity and insect conservation. Of the 50 websites chosen by the magazine, across six categories, ours was among the top ten in the Best Bug Sites category (see www.bbccountryfilemagazine.com/50-wildlife-sites).

MEMBERSHIP MATTERS: Enclosed with this issue of the *Record* is the annual membership renewal form. Please note:

1. The subscription price remains unchanged for 2010. The current subscription rates for the different AES periodicals are shown in the enclosed renewal form.
2. You only need to send in the renewal form if there are changes to your details (e.g. address, entomological interests, membership category / periodicals required) or if you are paying by cheque or postal order.
3. **PLEASE NOTE: If you subscribed to the Entomologist's record last year (2008) by standing order, please make sure that your standing order is still a) for the correct amount and b) is payable to the AES, not to the old Entomologist's Record bank account (which has now been closed). Some of you have paid too much, to the wrong account! We will write to you before the end of the year if we think you have paid too much for the 2009 membership year.**
4. Any questions about your membership should be sent to registrar@amentsoc.org or by post to the Registrar at the Society's PO Box address.

DATA PROTECTION ACT: Please note that all personal information supplied to the Society is treated in accord with the requirements of current data protection legislation and will be used only for the purposes of administering the Society. We will not divulge member information to any third party unless legally required to do so. It is technically possible for us to generate membership lists but there are no plans to do so during the coming membership year.



AES Events Calendar

September - November 2009



Please see the AES website for full and up to date listings of AES and other events.
All AES events are free to members and their guests.

Further details can also be obtained from the Secretary by post or via email (secretary@amentsoc.org)

Saturday 17th October:

ANNUAL AES EXHIBITION AND INSECT FAIR

Kempton Park Racecourse, Middlesex

The UK's premier entomological fair.

See pages opposite for details.

Saturday 7th November:

WORCESTERSHIRE ENTOMOLOGY DAY

A day of talks and displays organised by the Wyre Forest Study Group. This year the event will focus on changes in the insect fauna of the county resulting mainly from climate change. Prebooking is advised – **please note there is a charge of £8 for this event!** The meeting will be held at Heightington village hall at SO764711. If you would like to attend please contact Geoff Trevis (AES Conservation Representative for Worcestershire) on 01905 774952 or by e-mail at geoff.trevis@btinternet.com

The 2010 AES Members' Day & AGM will celebrate the 75th anniversary of the AES. It will be held on **Saturday 24th April** at the new Angela Marmont Centre for UK Biodiversity, The Darwin Building, Natural History Museum, London. Detailed information will follow closer to the time.

20th February 2010

Young Entomologists' Day at Oxford University

To mark the 75th anniversary of the AES we are holding a Young Entomologist's Day, hosted by Oxford University at their Museum of Natural History in Parks Road, Oxford OX1 3PW.

The day will begin with a keynote talk aimed at young entomologists by an invited speaker, followed by presentations by young entomologists aged up to 18 years old. Each participant will receive a certificate, and their presentations will be commented on by a panel of judges. Prizes will be awarded in three age categories, starting with age 8 and under. The criteria used by the judges will be made available to the presenters before the event. There will also be tours of the Hope Entomological Collections during the day. If you would like to attend (as a presenter or a member of the audience) or would like more information please email the AES Secretary (secretary@amentsoc.org) or write to: AES Secretary, PO Box 8774, London SW7 5ZG.

NOTE FOR YOUR DIARY: EXHIBITION DATE SATURDAY 17th OCTOBER 2009

Whether you're young or old, beginner or expert, there is something for everyone who loves bugs at the largest insect extravaganza of the year.

Join us at Kempton Park Racecourse on Saturday 17th October.



- Over 100 dealers
 - Caterpillars and Butterflies
 - Praying Mantids
 - Exotic Pets
 - Bug Pottery and Toys
 - Antique Boxes and Cabinets
 - Insect Identification Guide
 - Join Clubs and Societies
 - Rare and Recent Books
 - Meet other enthusiasts
 - Stick insects
 - Tarantulas and Scorpions
 - Nets, Traps and Equipment
 - Netting and Cages
 - Mounted Specimens
 - Leading Insect Artists

Kempton Park is situated under a mile from Junction 1 of the M3. Rail services operate to Sunbury Station, half a mile from the racecourse, from London Waterloo.

For further details contact the AES at:

*PO Box 8774, London SW7 5ZG
or alternatively visit the Society's Website at
www.amentsoc.org*

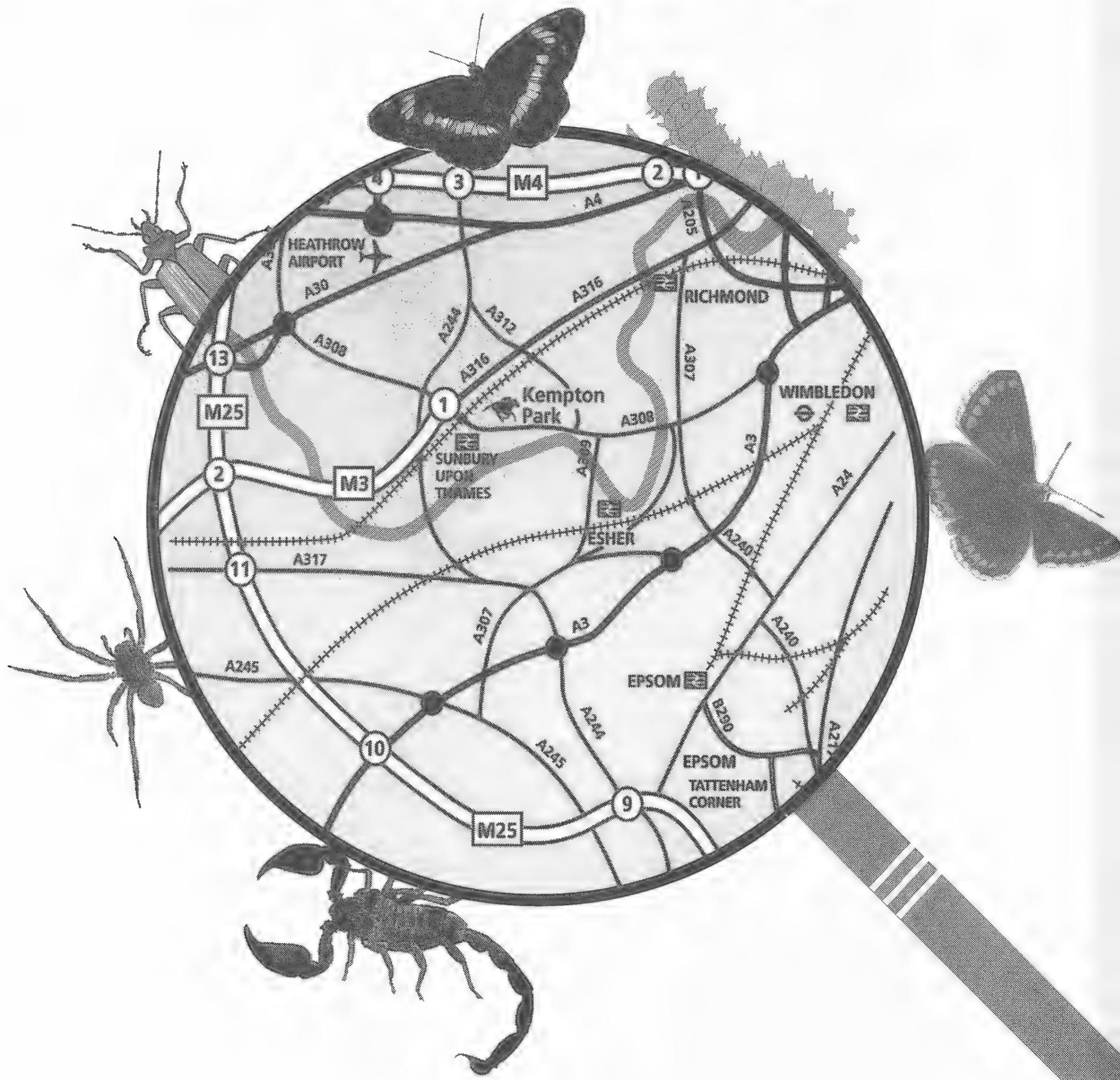
**AMATEUR ENTOMOLOGISTS' SOCIETY
ANNUAL EXHIBITION AND TRADE FAIR**

Saturday 17th OCTOBER 2009

11.00am - 4.30pm

**Kempton Park Racecourse
Staines Road, Sunbury, Middlesex**

HOW TO GET THERE



BY CAR

From the M25. Exit at Junction 12 (M3) towards Sunbury.
Exit the M3 at Junction 1 and take the A308 sign posted for Kempton Park.
The racecourse is situated one mile on the left hand side.

BY TRAIN

Two services an hour are operated from London Waterloo to Sunbury station by South West Trains. Journey time is approximately 40 minutes.

For more information contact London Travel Information on 020 7222 1234

Latest dates: W. C^NRWALL [1] IOS: Longstone, St Mary's, November (24) (Scott, 2008a); The Lizard, November (3) (Tunmore, 2008). DORSET [9] Portland Bird Observatory, November (1) (Cade, 2008). ISLE OF WIGHT [10] November (5) (Knill-Jones, 2008a). E. KENT [15] Isle of Thanet, November (1) (Solly *et al.*, 2008). S. ESSEX [18] Bradwell-on-sea, 2.11 (Dewick, 2008). MERIONETHSHIRE [48] Morfa Harlech area, November (1) (Hicks & Bantock, 2008). WATERFORD [H6] Tramore Bay, November (1) (Bryant & Walsh, 2008).

Large single night counts: W. C^NRWALL [1] IOS: Longstone, St Mary's, 12.6 (80), 13.8 (74), 7.10 (65) (MWS).

Most northerly records: N.E. YORKSHIRE [62] Skelton, 23.8 (DM per CHF). N.W. YORKSHIRE [65] Hutton Conyers, 23.8 (CHF). S. NORTHUMBERLAND [67] Monkseaton, 18.7 (M. Hodgson per K. Regan); Seaton Sluice, 14.7 (JPa per K. Regan); Tynemouth, 19.7 (3), 22.7 (TJT, K. Regan). KINCARDINESHIRE [91] St Cyrus, 11.8 (BJS, MRY, CMc per LJH).

Selected inland VC records/summaries: SURREY [17] Lingfield, 25.7 (KEN per GAC). BERKSHIRE [22] Mortimer, 18.7 (GJD per TN); Wokingham, 13.9, 14.9 (RH). BUCKINGHAMSHIRE [24] VC date range: 17.7 – 26.9; VC total: 7 (per MVA). HUNTINGDONSHIRE [31] Hartford, 16.7 (2) (M. Anderson per BD); Southoe, 24.8 (T. Lawrence per BD); Stow Longa, 6.10 (KRo per BD). MONTGOMERYSHIRE [47] Commins Coch, 2.11 (PRW). MID-W. YORKSHIRE [64] Ellington Banks, 24.8 (CHF *et al.*). N.W. YORKSHIRE [65] Hutton Conyers, 23.8 (CHF).

PIERIDAE

1545 *Colias croceus* (Geoff.) Clouded Yellow [I][MC]

Selected annual totals: W. C^NRWALL [1] IOS: Longstone, St Mary's – 404 (Scott, 2008a). E. SUFFOLK [25] Landguard – 32+ (Odin, 2008). S.E. YORKSHIRE [61] Spurn – 45 (Spence, 2008).

VC/County summaries: HUNTINGDONSHIRE [31] 5 adults: Needingworth Quarry, 25.8 (3), 29.8 (BJM per BD); Orton Longueville, 1.9 (BS per BD).

IRELAND [H1-40] 15.4 – 24.11, 73 adults in 4 counties (Walsh *et al.*, in press). WEXFORD [H12] 65 adults (Walsh *et al.*, in press).

Non-specific comments: ISLE OF WIGHT [10] ‘An average year’ (Knill-Jones, 2008a). S. HAMPSHIRE [11] Hayling Island, ‘not uncommon between mid-August and early November’ (Phillips & Johnson, 2008). E. SUFFOLK [25] Landguard, ‘one on 10.7 followed by records on 27 dates from 13.8 to 7.10, with a maximum of five on 13.9’ (Odin, 2008).

Earliest dates: E. C^NRWALL [2] Pencarrow, 24.3 (A. Payne per J. Worth); Seaton, 21.2 (T. Aston per LACT, via J. Worth). ISLE OF WIGHT [10] Ventnor, 11.3. (Knill-Jones, 2008a). S. HAMPSHIRE [11] Southbourne, 28.3 (J. Westlake).

Latest dates: ISLE OF WIGHT [10] Culver Down, 30.12 (Knill-Jones, 2008a).

Large counts: W. C^NRWALL [1] IOS: Longstone, St Mary's, 15.9 (30), 22.9 (21) (MWS). DORSET [9] Portland, Bill, 13.9 (12) (Cade, 2008). W. SUSSEX [13] Thorney/Pilsey Islands, 29.8 (20), 11.9 (30) (B. Collins per CRP). S.E. YORKSHIRE [61] Spurn, 6.9 (10) (BRS). WEXFORD [H12] The Raven, 6.10 (16), 12.10 (15) (Walsh *et al.*, in press).

Selected inland records: SURREY [17] Dunsfold, 20.6 (GAC). N. HAMPSHIRE [12] Danebury Hill, 6.9 (AHD). HUNTINGDONSHIRE [31] Needingworth Quarry, 25.8 (3), 29.8 (BJM per BD); Orton Longueville, 1.9 (BS per BD).

Evidence of breeding: E. KENT [15] Pegwell, 2.7, three larvae on *Medicago sativa* (Solly *et al.*, 2008).

NYMPHALIDAE

1590 *Vanessa atalanta* (L.) Red Admiral [R][I]

Selected annual totals: W. C^NRWALL [1] IOS: Longstone, St Mary's – 521 (Scott, 2007a). E. SUSSEX [14] Peacehaven – 211 (Pratt, 2008). E. KENT [15] Dungeness Bird Observatory – 484 (Clancy, 2008a). S.E. YORKSHIRE [61] Spurn – 1068 (Spence, 2008). WATERFORD [H6] Tramore Bay – 337 (Bryant & Walsh, 2008). W. CORK [H3] Dursey Island – 384 (Scott, 2008b).

VC/County summaries: HUNTINGDONSHIRE [31] 29.1, 4.3 - 5.11, 426+ adults (per BD).

IRELAND [H1-40] 13.1 – 26.12, 4296 adults in 27 counties (Walsh *et al.*, in press). CORK [H3/4/5] 2013 adults (Walsh *et al.*, in press). WATERFORD [H6] 575 adults (Walsh *et al.*, in press). WEXFORD [H12] 449 adults (Walsh *et al.*, in press). DOWN [H38] 455 adults (Walsh *et al.*, in press).

Earliest dates (active): E. C^NRWALL [2] St Austell, 1.1 (R. Crowle per R. Lane). N. DEVON [4] Chittlehampton, 1.1 (M. Braid). N. SOMERSET [6] Bristol, 1.1 (N. Jordan). ISLE OF WIGHT [10] Newport, 1.1 (I. Pratt); Osborne, 1.1 (Knill-Jones, 2008b). HAMPSHIRE [11/12] At least eleven

adults recorded on 1.1 from at least seven locations in the county (per Hampshire BC). W. SUSSEX [13] Aldwick, 1.1 (P. May per CRP); Blackdown Hill, 1.1 (SJP per CRP); Felpham, 1.1 (S. Manning per CRP); Fernhurst, 1.1 (SJP per CRP); Pulborough, 1.1 (2) (per CRP). E. SUSSEX [14] Icklesham, 1.1 (Hunter, 2008). S. ESSEX [18] Bradwell-on-sea, 1.1 (2) (Dewick, 2008); Redbridge, 1.1 (K. Black).

Latest dates (active): S. HAMPSHIRE [11] Gosport, 30.12 (Tinling, 2008). S. ESSEX [18] Bradwell-on-sea, 26.12 (Dewick, 2008); Thundersley, 29.12 (A. Jarrett). DONEGAL [H34/35] Glenveagh Castle, 26.12 (Walsh *et al.*, in press).

Large counts: DORSET [9] Portland, 26-28.4, 'large numbers arrived off the sea'; 28-29.4, 'many thousands present throughout the Island'; 4-5.6, 17.10, 'further large immigrations' (Cade, 2008). W. CORK [H3] Dursey Island, 10.6 (150+) (Scott, 2008b).

Dated light-trap records: W. CORNWALL [1] IOS: Longstone, St Mary's, 1.5, 10.6, 20.8, 18.10 (MWS). E. KENT [15] Lydd-on-sea, 27.8 (2) (DBe); New Romney, 25.7 (SPC). E. SUFFOLK [25] Bawdsey, 14.6, 24.7 (Deans, 2008).

Immature stages: W. CORNWALL [1] Truro, 22.7, larva(e) (GAC). DUBLIN [H21] No site, three pupae in April, larvae also noted (Walsh *et al.*, in press). DONEGAL [H34/35] No site, larvae noted (Walsh *et al.*, in press).

1591 *Vanessa cardui* (L.) Painted Lady [I]

Selected annual totals: E. KENT [15] Dungeness Bird Observatory – 262 (Clancy, 2008a). PEMBROKESHIRE [45] Skomer Island – 958 (Brown, 2008). S.E. YORKSHIRE [61] Spurn – 631 (Spence, 2008). W. CORK [H3] Dursey Island – 193 (Scott, 2008b).

VC/County summaries: HUNTINGDONSHIRE [31] 4.6 – 5.10, 63+ adults (per BD).

IRELAND [H1-40] 1.4 – 28.10, 1037 adults in 25 counties (Walsh *et al.*, in press).

Non-specific comments: W. CORNWALL [1] Maenporth, 'less than 10' recorded during the 2007 season (Davis, 2008). DORSET [9] Portland, 'a very poor season with the only double figure counts logged on a few dates in June, August and September' (Cade, 2008). ISLE OF WIGHT [10] 'A poor year' (Knill-Jones, 2008a). S. HAMPSHIRE [11] Hayling Island, 'in small numbers between June and October (Phillips & Johnson, 2008). E. SUFFOLK [25] Bawdsey, 'good numbers during the summer' (Deans, 2008); Landguard, 'numbers were low with autumn passage particularly poor' (Odin, 2008); Minsmere, 'a small influx in mid-June' (Harvey & Higgott, 2008).

Earliest dates (active): W. CORNWALL [1] IOS: Longstone, St Mary's, 10.1 (MWS per J. Worth); Loe Bar, 10.1 (JTB per J. Worth). E. CORNWALL [2] Trenarren, 16.1 (R. Lane per J. Worth).

Latest dates (active): S. HAMPSHIRE [11] Gosport, 8.12 (Tinling, 2008).

Large counts: E. KENT [15] Pegwell, 13.6 (60) (FS). N. ESSEX [19] Copt Hall Marshes, 10.8, 'thousands' (J. Firmin); East Mersea, 10.8, 'hundreds' (D. Urquhart); Old Hall Marshes, 10.8, 'hundreds' (T. Mendham). S.E. YORKSHIRE [61] Spurn, 5.6 (140) (Spence, 2008). S. ABERDEENSHIRE [92] Blackdog, 8-10.6, 'numerous' (NL). W. CORK [H3] Dursey Island, 10.6 (150+) (Scott, 2008b).

Dated light-trap records: W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6 (MWS). E. KENT [15] Lydd-on-sea, 9.6, 24.8 (DBe). S. ESSEX [18] Bradwell-on-sea, 19.8, 21.8 (Dewick, 2008).

Immature stages: W. CORNWALL [1] Truro, 22.7, larva(e) (GAC). DONEGAL [H34/35] No site, larvae recorded (Walsh *et al.*, in press).

GEOMETRIDAE

1720 *Orthonama obstipata* (Fab.) Gem [I]

Total no. reported: 195

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
107	40	24	8	-	2	-	1	2	-	11

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
-	2	1	17	2	12	7	42	9	85	13	1

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 86 (Scott, 2008a); The Lizard – 12 at four sites (Tunmore, 2008). E. KENT [15] Dungeness area – 13 at sixteen sites (Clancy, 2008a). WATERFORD [H6] Tramore Bay – 8 (Bryant & Walsh, 2008).

Ealiest dates: W. C^NRWALL [1] IOS: Longstone, St Mary's, 25.2, 16.3 (MWS). E. KENT [15] Lydd-on-sea, 21.2 (DBe).

Latest dates: W. C^NRWALL [1] IOS: Longstone, St Mary's, 3.12 (MWS).

Large single night counts: W. C^NRWALL [1] IOS: Longstone, St Mary's, 15.10 (6) (MWS).

Most northerly records: S. N^HUMBERLAND [67] Redesmouth, 28.10 (K. Regan). ISLE OF M^AN [71] No site(s), October (2) (Scott, 2008c).

Selected inland records: W. S^UFOLK [26] Broom's Barn, 23.8 (RIS per PJLG). M^ONTGOMERYSHIRE [47] Commins Coch, 30.10 (PRW).

SPHINGIDAE

1972 *Agrius convolvuli* (L.) Convolvulus Hawk-moth [I][In]

Total no. reported: 117

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
20	32	13	27	3	6	-	9	2	3	2

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
-	-	-	-	-	2	4	59	41	8	-	-

Selected annual totals from fixed traps: W. C^NRWALL [1] IOS: Longstone, St Mary's – 12 (Scott, 2008a). D^ORSET [9] Portland Bird Observatory – 14 (Cade, 2008).

Ealiest dates: W. C^NRWALL [1] IOS: St Mary's, 28.6 (MWS); Maenporth, 11.6 (GD).

Latest dates: W. C^NRWALL [1] IOS: Longstone, St Mary's, 10.10, 11.10 (MWS). D^ORSET [9] Middlebere Farm, 7.10 (Davey, 2008). E. KENT [15] Pegwell, 21.10 (FS). S. E^SSEX [18] Bradwell-on-sea, 5.10 (Dewick, 2008). GLAMORGAN [41] Cwm Ivy, Gower, 10.10 (VS, in Gilmore, 2008). S.E. Y^ORKSHIRE [61] Rudston, 7.10 (ASE per CHF).

Most northerly records: F^IFESHIRE [85] Inverdovat, 6.9 (TC per DD). CLYDE ISLES [100] Mount Stewart, Isle of Bute, September (GC per JW). E. ROSS [106] Fearn Station, 24.8 (BCB per JW).

Selected inland records: N. H^AMPSHIRE [12] Basingstoke, 25.8 (AHD). S^URREY [17] Old Woking, 23.8 (A. Borland). HUNTINGDONSHIRE [31] Ramsey Forty Foot, 18.7 (RSh per BD).

Immature stages: GLAMORGAN [41] Mewslade, Gower, 12.5, pupa found in a greenhouse from which an adult was bred (Gilmore, 2008). F^IFESHIRE [85] Binn Hill, 22.9, larva (M. Hadoke per DD).

1984 *Macroglossum stellatarum* (L.) Humming-bird Hawk-moth [I]

Minimum no. reported: 579

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
130	171	95	54	51	22	8	9	6	2	31

Months of occurrence (active):

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	25	110	34	10	67	125	71	50	50	3	1

Selected annual totals: W. C^NRWALL [1] IOS: Longstone, St Mary's – 26 (Scott, 2008a). ISLE OF WIGHT [10] Island total – 60 (Knill-Jones, 2008a). E. KENT [15] Dungeness area – 27 (Clancy, 2008a).

VC/County summaries: E. C^NRWALL [2] 1.3 – 26.8, 24.10, 21 adults, plus an adult indoors on 14.12 (per LACT). H^AMPSHIRE [10/11/12] 8.2 – 6.10, 58+ adults (per TN). BUCKINGHAMSHIRE [24] 18.3, 30.6 – 18.9; 11 adults (per MVA). S^UFOLK [25/26] 11.2 – 15.9, 33+ adults (per AWP). BEDFORDSHIRE [30] 27.2 – 25.9, ten adults (per AMB). HUNTINGDONSHIRE [31] Four records: Farce Fen, 18.7 (S. Dudley per BD); Little Paxton, 1.10 (ID per BD); Warboys, 24.1, indoors (per BD); Yaxley, 15.7 (AF per BD). GLOUCESTERSHIRE [33/34] 3.2 – 28.7, seven adults (per RGG). WARWICKSHIRE [38] 18.2 – 28.6, five adults (per

DCGB). NOTTINGHAMSHIRE [56] One record: Cropwell Butler, 8.10 (P. Dulwich per SW). YORKSHIRE [61-65] 9.3 – 28.7, 30.10, 12 adults (per CHF).

IRELAND [H1-40] 6.2 – late October, 31+ adults in ten counties (Walsh *et al.*, in press). CORK [H3/4/5] 13+ adults (Walsh *et al.*, in press).

Earliest dates (active): W. CORNWALL [1] Penzance, 10.1 (M. Semmens per J. Worth). S. DEVON [3] Ilfracombe, 23.2 (A. Kingston); Paignton, 2.2 (D. Smith); Topsham, 4.2, 20.2 (J. Hearfield). DORSET [9] Four reports in January and two in February in the county (Benham, 2007), including Portland Bird Observatory, 2.2 (Cade, 2008). ISLE OF WIGHT [10] February (5) (Knill-Jones, 2008a); Gurnard, 8.2 (DTB per TN); Ventnor, 8.2 (C. Haygarth). S. HAMPSHIRE [11] Fareham, 1.2 (R. Boswell); Gosport, 3.2, nectaring on daffodils (M. Donnelly); Havant, 4.2 (M. Hampton); Netley, 31.1, nectaring on pansies (M. Smith); no site given, 4.2 (P. Vigus). W. SUSSEX [13] Hove, 17.2 (C. Burgess per CRP). E. SUSSEX [14] Seaford, 6.1 (CMB per CRP). E. KENT [15] Dungeness, 3.2 (DW). E. SUFFOLK [25] Gorleston-on-sea, 20.2 (K. Knights per AWP). W. SUFFOLK [26] Sudbury, 11.2 (M. White per AWP). BEDFORDSHIRE [30] Willington, 27.2 (S. Williams per AMB). W. GLOUCESTERSHIRE [34] Cold Ashton, 3.2 (D. Elliott per RGG). WARWICKSHIRE [38] Solihull, 18.2 (R. Kesterton per DCGB). MONTGOMERYSHIRE [47] Y Felin, 1.2 (per PRW). N. NORTHUMBERLAND [68] Brunton, 1.1 (K. Redgrave per K. Regan). W. CORK [H3] Great Island, 6.2 (J. Lynch, in Walsh *et al.*, in press).

Latest dates (active): E. CORNWALL [2] Pentewan, 19.11 (R. Lane per J. Worth); Tredrossel, 14.12 (G.F. Truscott per APJ). DORSET [9] Portland Bird Observatory, 27.11 (Cade, 2008). W. SUSSEX [13] Findon, 3.11 (A. Thomas per CRP).

Large counts: E. KENT [15] Dungeness, 21.9 (3) (DW).

Most northerly records: E. ROSS [106] Aultgowrie, 23.7 (2) (M. Currie, A. Scott per JW).

Dated light-trap records: W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6, 1.10 (MWS). E. CORNWALL [2] Veryan, 23.9 (PK per APJ). E. NORFOLK [27] Weybourne, 5.8 (MP per DH). N.E. YORKSHIRE [62] Skelton, 30.10 (S. Farish per CHF). E. CORK [H5] Ballycotton, 9.6 (SPC, PDC, JMc).

Evidence of hibernation: E. CORNWALL [2] Tredrossel, 14.12, indoors (GFT per LACT). ISLE OF WIGHT [10] Ventnor, 8.2, active indoors (flying at window) (C. Haygarth). S. HAMPSHIRE [11] No site given, adult hibernating in underground car park (from 16.11.06) until 4.2 (P. Vigus). HUNTINGDONSHIRE [31] Warboys, 24.1, inside a house (per BD).

The number of widely spread early spring records also probably reflect the successful overwintering of a large number of adults following the large immigration of this species in 2006 (see Clancy, 2008c).

Immature stages/Evidence of breeding: W. CORNWALL [1] Coverack, 17.4, ovipositing female (M. Warren per J. Worth). E. CORNWALL [2] Pons Mill, 'breeding locally' (R. Lane, J. Worth). S. HAMPSHIRE [11] Magdalen Hill Down, 2.4, ovipositing female (P. Fleet). WATERFORD [H6] Cahernaleague, Ballinamult, 27.8, larva (JJC, in Walsh *et al.*, in press).

NOCTUIDAE

2091 *Agrotis ipsilon* (Hufn.) Dark Sword-grass [I]

Total no. reported: 875

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
299	112	164	104	19	34	-	71	21	3	48

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1	37	67	102	130	116	138	72	132	19	-

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 176 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 59 (Cade, 2008). E. KENT [15] Dungeness area – 63 at sixteen sites (Clancy, 2008a); Isle of Thanet – 58 at five sites (Solly *et al.*, 2008).

Earliest dates: W. CORNWALL [1] Buryas Bridge, 6.1, 15.2 (LO).

Latest dates: E. CORNWALL [2] Downderry, 24.11 (SCM per LACT).

2119 *Peridroma saucia* (Hb.) Pearly Underwing [I]

Total no. reported: 907

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
341	217	197	70	14	26	-	18	8	-	16

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
19	20	29	145	102	91	34	65	57	253	86	4

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 253 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 119 (Cade, 2008). E. KENT [15] Dungeness area – 55 at sixteen sites (Clancy, 2008a); Isle of Thanet – 76 at five sites (Solly *et al.*, 2008).

Ealiest dates: W. CORNWALL [1] Church Cove, The Lizard, 7.1 (Tunmore, 2008); IOS: Longstone, St Mary's, 4.1, 5.1 (MWS). S. DEVON [3] Uplyme, 4.1 (AK). E. KENT [15] Lydd-on-sea, 3.1 (RCI). MIDDLESEX [21] Heathrow, 3-7.1 (RIS per PJLG).

Latest dates: W. CORNWALL [1] IOS: Longstone, St Mary's, 30.12, 31.12 (MWS). E. KENT [15] Dungeness, 4.12 (KRe). S. ESSEX [18] Bradwell-on-sea, 4.12 (Dewick, 2008).

Most northerly records: S. NORTHUMBERLAND [67] Tynemouth, 3.6, 24.10, 26.10 (K. Regan, TJT).

Selected inland records: SURREY [17] Givons Grove, 12.8 (AMH per GAC); Guildford, 8.6 (JSA per GAC); Epsom Downs, 30.7 (BJG per GAC). MIDDLESEX [21] Heathrow, 3-7.1 (RIS per PJLG). BEDFORDSHIRE [30] Kempston, 10.10 (MJP per AMB). E. GLOUCESTERSHIRE [33] Cheltenham, 24.5 (GHJM per RGG); Thrupp, 10.10 (PDJH per RGG).

2195 *Mythimna vitellina* (Hb.) Delicate [I][MC]

Total no. reported: 2754

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
620	1297	529	161	107	12	4	5	-	-	19

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
-	-	-	-	36	591	168	45	572	1090	173	-

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 405 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 185 (Cade, 2008); West Bexington – 262 (Eden, 2008). ISLE OF WIGHT [10] Island total – 642 (Knill-Jones, 2008a); Totland – 291 (SAK-J). E. KENT [15] Dungeness area – 269 at sixteen sites (Clancy, 2008a).

Ealiest dates: ISLE OF WIGHT [10] Bonchurch, 2.5, dark specimen likely to have been locally bred (JH).

Latest dates: E. KENT [15] Lydd-on-sea, 14.11 (RCI).

Large single night counts: W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6 (11), 16.6 (13), 21.6 (10), 2.10 (12), 3.10 (15), 9.10 (13), 11.10 (11), 12.10 (12), 14.10 (11) (MWS). DORSET [9] Durlston, 3.10 (8) (DCGB); Studland, 2.10 (10) (DCGB). E. SUFFOLK [25] Bawdsey, 16.10 (8) (MJD per AWP); Dunwich, 16.10 (8) (JHC per AWP).

Most northerly records: S. NORTHUMBERLAND [67] Tynemouth, 27.10 (TJT per K. Regan).

Selected inland records: N. HAMPSHIRE [12] Crawley, annual total: 62 (RAB per TN). SURREY [17] Guildford, 15.9 (JSA per GAC); Holmbury St Mary, 9.6, 26.6, 7.7, 11.7, 12.9, 30.9, 11.10, 16.10 (PLH per GAC); Lingfield, 14.10 (KEN per GAC); Nutfield, 15.7 (PAC per GAC); Send, 27.10 (AG per GAC). BERKSHIRE [22] Mortimer, 20.9 (GJD per TN); Reading, 15.6 (NMH, in Clancy, 2008b). BUCKINGHAMSHIRE [24] Ballinger Common, 20.6 (P. Hall per MVA); Burnham Beeches, 22.10 (RIS per PJLG); Stony Stratford, 10.6 (M. Killeby per MVA); Turville Heath, 21.9 (TWH per MVA). E. NORFOLK [27] Runhall, 3.8 (JG per DH). BEDFORDSHIRE [30] Haynes, 26.7 (SK per AMB). HUNTINGDONSHIRE [31] Earith, 18.6 (D. Griffiths per BD); Old Weston, 22.9, 2.10 (KR per BD); Ramsey Heights, 16.6 (ASW per BD); St Neots, 9.10, 15.10

(RSc per BD). W. GLOUCESTERSHIRE [33] Cinderford, 21.6 (RER per RGG). HEREFORDSHIRE [36] Bodenham, 6.6 (R. Hemming). WARWICKSHIRE [38] Solihull, 25.10 (R. Ledbury per DCGB); Temple Grafton, 10.10 (AFG per DCGB); Warwick, 21.10, 31.10 (SDT per DCGB). KILKENNY [H11] Ballynaboley, Kilmacow, 8.7 (A. Allen; in Walsh *et al.*, in press).

2203 *Mythimna unipuncta* (Haw.) White-speck [I][MC]

Records of this species from the Isles of Scilly are summarised in a separate section below but have otherwise been excluded from this account. This is due to the presence of a resident population of *M. unipuncta* on the Scillies, and the records of large numbers of locally-bred adults being indistinguishable from records of an immigrant origin.

Total no. reported: 142

Distribution of records:

SW	CS	SE	EA	SI	W	CE	NE	NW	S	I
42	83	10	1	1	2	-	-	1	-	2

Months of occurrence:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12	-	-	-	1	-	4	5	2	50	62	6

Selected annual totals from fixed traps: W. CORNWALL [1] The Lizard – 24 at four sites (Tunmore, 2008). DORSET [9] Portland Bird Observatory – 40 (Cade, 2008).

Ealiest dates: W. CORNWALL [1] Church Cove, The Lizard, 3.1 (Tunmore, 2008).

Latest dates: W. CORNWALL [1] Maenporth, December (1) (Davis, 2008). S. DEVON [3] Uplyme, 4.12 (AK). DORSET [9] Portland Bird Observatory, December (1) (Cade, 2008). W. SUSSEX [13] Walberton, 5.12 (3) (JTR per CRP).

Large single night counts: W. SUSSEX [13] Walberton, 5.12 (3) (JTR per CRP).

Most northerly records: ISLE OF MAN [71] No site, November (1) (Scott, 2008c).

Selected inland records: SURREY [17] Holmbury St Mary, 28.11 (PLH per GAC).

Scilly Isles [1] summary: Longstone, St Mary's - 2007 annual total: 6726; monthly totals: Jan (79), Feb (11), Mar (1), Apr (61), May (178), Jun (110), Jul (95), Aug (717), Sep (369), Oct (2429), Nov (2197), Dec (479) (Scott, 2008a); peak counts: 15.10 (229), 4.11 (432), 17.11 (239), 3.12 (202) (MWS).

2441 *Autographa gamma* (L.) Silver Y [I]

Selected annual totals from fixed traps: W. CORNWALL [1] IOS: Longstone, St Mary's – 604 (Scott, 2008a). DORSET [9] Portland Bird Observatory – 522 (Cade, 2008). E. KENT [15] Dungeness area – 907+ at sixteen sites (Clancy, 2008a); Isle of Thanet – 865 at five sites (Solly *et al.*, 2008). S. ESSEX [18] Bradwell-on-sea – 853 (Dewick, 2008). S.E. YORKSHIRE [61] Spurn/Kilnsea – 815 (PAC, BRS per CHF). W. CORK [H3] Dursey Island – 725 (Scott, 2008b).

Ealiest dates: W. CORNWALL [1] Falmouth, 13.1 (JBC per APJ); IOS: Longstone, St Mary's, 8.1 (MWS). S. DEVON [3] Uplyme, 10.1, 19.1 (AK). N. HAMPSHIRE [12] Basingstoke, 19.1 (M. Wall per TN); Fleet, 19.1 (GCS per TN). E. KENT [15] Lydd, 16.1 (KRe). S. ESSEX [18] Bradwell-on-sea, 16.1, 17.1, 18.1, 19.1 (Dewick, 2008). BUCKINGHAMSHIRE [24] Great Kimble, 5.1 (M. Harvey per MVA). E. SUFFOLK [25] Minsmere, 5.1 (RMH per AWP). S.E. YORKSHIRE [61] Kilnsea, 9.1 (PAC per CHF).

Latest dates: W. CORNWALL [1] IOS: Longstone, St Mary's, 30.12 (MWS). WATERFORD [H6] Tramore, 18.12 (ABr, in Walsh *et al.*, in press).

Large single night counts: W. CORNWALL [1] IOS: Longstone, St Mary's, 10.6 (78) (MWS). S. ESSEX [18] Bradwell-on-sea, 25.8 (35) (Dewick, 2008). S.E. YORKSHIRE [61] Spurn/Kilnsea, 27.6 (85), 28.6 (71), 5.7 (47) (BRS, PAC per CHF). S. NORTHUMBERLAND [67] Tynemouth, 7.6 (82) (TJT per K. Regan).

Large diurnal/dusk counts: S.E. YORKSHIRE [61] Spurn, annual total – 343, including 93 on 15.6 (Spence, 2008). W. CORK [H3] Dursey Island, 30.4 (50+), 9.6 (400+), 10.6 (200+) (Scott, 2008b).

Immature stages: E. KENT [15] New Romney, 6.4, full-grown larva on *Rumex* spp., adult bred (SPC).

ANNEX 3: SELECTED 2007 CHANNEL ISLANDS [VC 113] RECORDS

- 1262** *Cydia amplana* (Hb.)
Jersey: Trinity, 11.8 (RLo *et al.* per LJH).
- 1403a** *Duponchella fovealis* (Zell.)
Guernsey: St John, 14.2, first Guernsey record (RA, in Lawlor, 2008).
- 1488a** *Agdistis tamaricis* (Zell.)
Jersey: La Mielle de Morville, 22.8, four larvae, first VC records (Hammond, 2008).
- 1539** *Papilio machaon* ssp. *gorganus* (Fruhs.) Continental Swallowtail
Guernsey: Icart, 19.4 (Lawlor, 2008); Mont Herault, 28.4 (Lawlor, 2008).
- 1594** *Aglais polychloros* (L.) Large Tortoiseshell
Guernsey: Rue des Reines, 17.7 (Lawlor, 2008); Vau de Monel, 11.3 (Lawlor, 2008).
- 1639** *Dendrolimus pini* (L.) Pine-tree Lappet
Jersey: St Brelade, 11.8 (RLo per LJH). F 1
- 1678a** *Cyclophora ruficiaria* (H.-S.) Jersey Mocha
Guernsey: St Martins, 9.8, second Guernsey record (RA, in Lawlor, 2008).
- 1990** *Hyles livornica* (Esp.) Striped Hawk-moth
Guernsey: St Peter Port, 17.6 (PDMC, in Lawlor, 2008).
- 2021** *Thaumetopoea pityocampa* (D. & S.) Pine Processionary
Guernsey: St Peter Port, 22.7, first Guernsey record (PDMC, in Lawlor, 2008). Jersey: St John, 13.7 (Long, 2007). First VC records.

ANNEX 4: INITIALS OF RECORDERS

AA	Ashworth, A.	GS	Sell, G.	PA	Allen, P.
ABr	Bryant, A.	GSAS	Spraggs, G.S.A.	PAB	Boswell, P.A.
AC	Colston, A.	HE	Edmunds, H.	PAD	Davey, P.A.
AECA	Adams, A.E.C.	HEB	Beaumont, H.E.	PBo	Bonham, P.
AF	Frost, A.	HWH	Wood Homer, H.	PC	Cordell, P.
AFG	Gardner, A.F.	IA	Andrews, I.	PD	Durnell, P.
AGJB	Butcher, A.G.J.	IC	Cook, I.	PDC	Chapman, P.D.
AHD	Dobson, A.H.	ICF	Fletcher, I. & C.	PDJH	Hugo, P.D.J.
AJa	Jafkins, A.	ID	Dawson, I.	PDMC	Costen, P.D.M.
AJe	Jenkins, A.	IDM	Masters, I.D.	PGA	Akers, P.G.
AJo	Johnson, A.	IGMR	Reid, I.G.M.	PH	Harris, P.
AJM	Morris, A.J.	IL	Lang, I.	PHS	Stirling, P.H.
AJS	Shearman, A.J.	IM	Marshall, I.	PJB	Baker, P.J.
AJW	Wheeldon, A.J.	IR	Roberts, I.	PJLG	Gould, P.J.L.
AK	Kennard, A.	IRT	Thirlwell, I.R.	PJS	Sellar, P.J.
AM	Martin, A.	JBC	Cooke, J.B.	PK	Kitchener, P.
AMB	Bantherope, A. & M.	JBH	Higgott, J.B.	PLH	Haynes, P.L.
AMH	Hoare, A.M.	JCD	Dickson, J. & C.	PM	Milton, P.
AP	Pease, A	JCN	Nicholls, J.C.	PMH	Hill, P.M.
APJ	James, A. & P.	JE	Edwards, J.	PMP	Potts, P.M.
ARC	Collins, A.R.	JF	Foster, J.	PMW	Walsh, P.M.
ASE	Ezard, A.S.	JG	Geeson, J.	PQW	Winter, P.Q.
ASW	Wallis, A. & S.	JH	Halsey, J.	PRW	Williams, P.R.
AVK	Kingston, A.V.	JHC	Clarke, J.H.	PS	Sharpe, P.
AWP	Prichard, A.W.	JJo	Jones, J.	PTh	Thompson, P.
BB	Banson, B.	JJC	Cahill, J.J.	PTi	Tilley, P.
BCB	Ballinger, B. & C.	JM	Martin, J.	PTr	Trodd, P.
BD	Dickerson, B.	JMc	McGill, J.	PW	Waterton, P.
BFS	Skinner, B.F.	JN	Nelson, J.	RA	Austin, R.
BH	Hunt, B.	JO	Owen, J.	RAB	Bell, R.A.
BJG	Grabaskey, B.J.	JPa	Parrack, J.	RAH	Hardinge, R.A.
BJM	Milne, B. & J.	JPo	Porter, J.	RBW	Wynn, R.B.
BJS	Stewart, B.J.	JRL	Langmaid, J.R.	RCh	Chapman, R.
BP	Pollinger, B.	JS	Scanes, J.	RCI	Clamp, R.
BPH	Henwood, B.P.	JSA	Austin, J.S.	RCo	Coomber, R.
BRS	Spence, B.R.	JTR	Radford, J.T.	RD	Dickson, R.
BS	Stone, B.	JW	Waddell, J.	REd	Eden, R.

BSM	Morland, B. & S.	JWC	Cooper, J.W.	RER	Radcliffe, R. & E.
BW	Withers, B.	KB	Bland, K.	RET	Turley, R.E.
BWO	Ofield, B.W.	KEN	Noble, K.E.	RFM	McCormick, R.F.
CGH	Harrison, C.G.	KG	Godfrey, K.	RGG	Gaunt, R.G.
CHF	Fletcher, C.H.	KGMB	Bond, K.G.M.	RH	Hayward, R.
CLJ	Jones, C. & L.	KNA	Alexander, K.N.	RIS	Rothamsted Insect Survey
CM	Moore, C.	KRe	Redshaw, K.	RJC	Carpenter, R.J.
CMc	McGuigan, C.	KRo	Royles, K.	RK	Kiddie, R.
CMB	Brooks, C.M.	KW	Wheeler, K.	RLa	Lambert, R.
CRP	Pratt, C.R.	LACT	Truscott, L.A.C.	RLo	Long, R.
CT	Turley, C.	LdeW	de Whalley, L.	RMH	Harvey, R.M.
DA	Allan, D.	LJH	Hill, L.J.	RSc	Scott, R.
DAC	Coleman, D.A.	LO	Oakes, L.	RSh	Shotbolt, R.
DBe	Beck, D.	MAS	Snelling, M.A.	RT	Terry, R.
DCGB	Brown, D.C.G.	MB	Blencowe, M.	SB	Bayley, S.
DD	Davidson, D.	MC	Cade, M.	SC	Colenutt, S.
DDB	Bowes, D. & D.	MCM	Marsh, M.C.	SCM	Madge, S.C.
DF	Foot, D.	MCP	Perry, M.C.	SD	Dumican, S.
DH	Hipperson, D.	MCT	Townsend, M.C.	SDT	Taylor, S.D.
DJK	Kingman, D. & J.	MFB	Feeny-Brown, M.	SI	Ingram, S.
DLW	Wilton, D.L.	MFS	Stoyle, M.F.	SJB	Broyd, S.J.
DM	Money, D.	MGH	Hodges, M.G.	SJP	Patton, S.J.
DMP	Penton, D. & M.	MJ	Jeffes, M.	SJW	Wright, S.J.
DNB	Burrows, D.N.	MK	Knott, M.	SK	Knight, S.
DRML	Long, D.R.M.	MLK	Keen, M.L.	SMG	Sussex Moth Group
DTB	Biggs, D.T.	MLO	Opie, M.L.	SPC	Clancy, S.P.
DW	Walker, D.	MM	Meehan, M.	SW	Wright, S.
EC	Carpenter, E.	MP	Preston, M.	TBr	Brereton, T.
FK	Kenington, F.	MRH	Honey, M.R.	TC	Cunningham, T.
FS	Solly, F.	MRY	Young, M.R.	TDC	Codlin, T.D.
FTJ	Johns, F.T.	MSP	Parsons, M.S.	TH	Hodge, T.
GAC	Collins, G.A.	MTh	Thompson, M.	THF	Freed, T.H.
GAF	Foggitt, G. & A.	MTu	Tunmore, M.	TJT	Tams, T.J.
GBS	Senior, G.B.	MVA	Albertini, M.V.	TN	Norriess, T.
GC	Collis, G.	MW	Wilson, M.	TR	Rouse, T.
GCE	Evans, G.C.	MWS	Scott, M.A. & W.J.	TS	Steele, T.
GCS	Stephenson, G.C.	NB	Bowles, N.	TWH	Harman, T.W.
GD	Davis, G.	NL	Littlewood, N.	VJS	Searle, V.J.
GG	Geiger, G.	NLJ	Jarman, N.L.	VS	Shenston, V.
GHJM	Meredith, G.H.J.	NM	Mason, N.	VVP	Proklov, V.V.
GJD	Dennis, G.J.	NMH	Hall, N.M.	WA	Attridge, W.
GN	Naylor, G.	NO	Odin, N.	WC	Curtis, W.
GRH	Hopkins, G.R.	NS	Sherman, N.	WN	Norman, W.

APPENDIX 1

Corrections/Additions to 2006 report

- 0825 *Phthorimaea operculella* (Zell.) [I][In]
WATERFORD [H6] Tramore, [29.9, provisionally new to Ireland] should be dated 28.9 and has now been ratified by the MothsIreland Validation Committee (ABr, pers. comm.).
- 1408 *Palpita vitrealis* (Rossi) [I]
DUMFRIES-SHIRE [72] Connansknowe, 22.9, first VC record (R. & B. Mearns, in Langmaid & Young, 2009).
- 1475 *Epeorus kuehniella* (Zell.) [In][I]
GLAMORGAN [41] Whitchurch, 11.12 (J. Hill, in Gilmore, 2008).
- 1972 *Agrius convolvuli* (L.) Convolvulus Hawk-moth [I][In]
E. PERTHSHIRE [89] Piper's Croft, 23.9, 1.10 (J. Thorpe).
- 1984 *Macroglossum stellatarum* (L.) Humming-bird Hawk-moth [I]
E. PERTHSHIRE [89] Balbeggie, 13.7 (S. Wilkie per J. Thorpe); Pitlochry, 16.9 (A. Cowan per J. Thorpe).
- 2119 *Peridroma saucia* (Hb.) Pearly Underwing [I]
E. PERTHSHIRE [89] Piper's Croft, 21.9 (J. Thorpe).

- 2137 *Eurois occulta* (L.) Great Brocade [I][R]
DORSET [9] Christchurch, 13.8 (P. Hugo, in Davey, 2008).

APPENDIX 2

Corrections/Additions to 2005 report

- 1262 *Cydia amplana* (Hb.) [I]
MONMOUTHSHIRE [35] Risca, 12.8, first VC record (M.E. Anthoney, in Langmaid & Young, 2009). RADNORSHIRE [43] Glasbury, 12.8, first VC record (P. & V. Clarke, in Langmaid & Young, 2009). These records were also the first of this species in Wales.

APPENDIX 3

Corrections/Additions to 2001 report

- 2385 *Spodoptera exigua* (Hb.) Small Mottled Willow [I]
The record of this species from Eaton Ford on 2.7 (R. Bashford) given as VC29 should relate to VC30 (AMB, pers. comm.).

Acknowledgements

My thanks go to all of the above mentioned recorders and contributors, in particular those who took the time to send in records directly and the county recorders who provided comprehensive spreadsheet data from their respective territories, if only there were more of you!.

I am again very grateful to Bernard Skinner for his assistance with the current report; also Roger Long for again checking through the VC113 data prior to publication and Paul Walsh for providing definitive totals and associated data for the whole of Ireland.

Thanks are again due to the Meteorological Office for facilitating access to, and allowing the publication of, the weather charts included in the introduction.

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The distribution of *Parna apicalis* (Brischke, 1888) (Sym.: Tenthredinidae) in Britain

The leaf-mining sawfly *Parna apicalis* was first noted as British in 2007 when larvae were found on *Tilia cordata* in Kent (Edmunds, Hind, Liston & Palmer, 2007. *Ent. Rec.* 119: 223-226). Since then, there have been many further sightings throughout England and it appears that this species is in fact rather widespread at present. The opportunity is taken, therefore, to record the current distribution of this species. Known records of positively identified leaf mines are listed below and then presented on a distribution map.

Location	Vice County	Recorder	Date
Victoria Park, Bedminster	6	Rich Andrews	25/05/2008
Ryde	10	David Biggs	28/05/2009
Peasmash Place	14	Keith Palmer	03/05/2009
Playden Churchyard	14	Keith Palmer	15/06/2009
Tunbridge Wells Common	16	Keith Palmer	2007, 2008
Tunbridge Wells, Calverley Park	16	Keith Palmer	20/05/2008
Tunbridge Wells, The Grove	16	Keith Palmer	26/05/2009
Hosey Common, Westerham	16	Keith Palmer	18/07/2008
Wisley RHS Gardens	17	Andrew Halstead	2007, 2008, 2009
Kew Gardens	17	Andy Banthorpe	20/07/2009
Haughton Hall	25	Colin Plant	08/06/2009
Earlham Cemetery, Norwich	27	Stuart Paston	09/05/2009
Kingfishers Bridge	29	Ian Barton	26/06/2008
Spire Lea Hospital, Impington	29	Ian Barton	03/06/2009
Stretham Church	29	Ian Barton	04/06/2009
Ampthill Park	30	Melissa Banthorpe	11/05/2009
Chicksands Wood	30	Melissa Banthorpe	06/05/2009
Albrighton	40	Guy Knight	01/06/2008
Albrighton	41	Guy Knight	01/06/2008
Hoseley Hall	50	Bryan Formstone	20/05/2008
Gresford	50	Bryan Formstone	21/05/2008
Clumber Park	56	Keith Palmer	20/06/2008
Poynton	58	Steve Hind	31/05/2007
Poynton	58	Steve Hind	31/05/2007
Daresbury Cutting, Warrington	58	Steve McWilliam	22/05/2008
Marbury Country Park, Northwich	58	Steve McWilliam	05/07/2009
Stanway Park, Stanway	33	Robert Homan	05/07/2009
Cheltenham (various localities)	33	Robert Homan	06/07/2009
Cheltenham (various localities)	33	Robert Homan	06/07/2009
Bute Park, Cardiff	41	David Slade	08/06/2009



Figure 1. Distribution by 10 kilometre squares of *Parna apicalis* in the British Isles at September 2009.

Although the distribution shown here may reflect the pattern of interested observers rather than the full extent of colonisation of this early-season leaf miner through the UK, the wide geographical spread of records nevertheless reinforces the notion that it has been overlooked. It seems to be able to spread from the mainland to islands, as the sightings in the Isle of Wight demonstrate. It will be interesting to monitor its future distribution in the UK.

I am very grateful to all the recorders who have now provided information so that this newly discovered miner can be mapped for the first time.— ROB EDMUNDS, 32 Woodcote Green, Calthorpe Park, Fleet, Hampshire (E-mail: r.edmunds@ntlworld.com).

Hazards of butterfly collecting. A missing of minds – Copenhagen, 2004

July 2004 found me in the Central Specialist Hospital for Denmark (Rigshospitalet) awaiting open heart surgery to repair, perhaps replace, my mitral valve. It had been a long journey. I had spent June and July in London and Nairobi doing the final desk and museum research for my book *Butterflies of West Africa*, the biggest such project that I had ever undertaken. I stopped off in Bangkok on my way home to Hanoi in order to have a cardiac check-up with the doctor who had been supervising my somewhat dysfunctional mitral valve for the past two years. He was happy with what he saw . . . I was happy with his conclusion, though at some time in the future a valve repair would become necessary. I walked the kilometre or so back to my hotel. While crossing the footbridge over one of Bangkok's clogged and dangerous main roads, I suddenly felt very tired and weak.

The next morning, back in Hanoi, ready to get on with the book, I really did feel poorly. I saw the doctor dealing with UN staff – my wife, Nancy, was working with UNAIDS. I was immediately dispatched to the best hospital in Hanoi, though one with rather inadequate cardiac care facilities. I saw an echo-scan showing the valve hanging by a thread, literally, fluttering aimlessly in the blood stream so that most of the blood went right back instead of into the system – regurgitation, they called it. The wheels were set in motion to get me to Copenhagen . . . pronto. Nancy insisted on coming with me. A week later we set off. I was sort of mobile, but during the stop to change planes in Bangkok I was transported in one of the little cars that go beep-beep and scare the living daylights out of walking passengers. Our health insurance put us in the – genuine – luxury of business class on the Thai Airlines 747, strictly for safety's sake.

Next day we had a great picnic lunch on the boat of our some of our oldest and best friends, just a few hundred metres from the moorings to be on the safe side. I was then entrusted to the hospital. Four days went by with innumerable tests, preparations, and paperwork till the operation was finally scheduled. In between, I settled down to transcribe all the data that I had amassed in Nairobi and London. I also got connected to my e-mail – the head nurse of the cardiac ward, bless her, found an old direct phone line in a disused office since the hospital payphones did not deal with e-mail. The hospital was not wired for computers either – you had to sit in one of the corridors at a low table.

I got a fair amount of writing done in between paperwork and tests till the operation was scheduled. I was then issued with an excellent and comprehensive booklet on what was going to happen, down to the last detail, even including the 2.7% mortality risk of the operation. I left my computer in the corridor and was reading this booklet in the dining area when I was joined by a nice woman; she had spent much time at the hospital and knew its ways. We had earlier had some pleasant chats. I was preoccupied with the booklet: risk or not, this was my first-ever real operation and open-heart surgery is genuinely a daunting prospect. She looked at me and suddenly said: 'You must be a very brave man!' I was completely taken aback. That was not really how I felt. I hummed and hawed . . . but this has got to be done . . . the risk is quite low . . . these people are very good at doing it . . . I would soon be dead without the operation . . . it is going to be

OK. I was touched by her concern. She looked at me earnestly, and said very firmly: 'Well, I certainly would not dare leave *my* computer out in the corridor while having dinner'. She was right, of course. There had been a spate of cases where thieves combed the wards for easy pickings in corridors and empty rooms. But I do think it was the most wonderful "missing of minds" in which I have ever been involved. The next morning I gave a small seminar on amusing aspects of butterfly life, with five people cramming round my portable computer. In the afternoon Nancy and my siblings came to wish me luck. As they left, they were already fading from view as the anaesthetic began to work.

The operation went well. I was chased out of bed for exercise the following day. There was no more talk of hearts and such – the focus was now all on the ribcage that had been sawed in half and hurt like hell, even with painkillers. It was the reign of the physiotherapists. After two days I was told I would have to stay in hospital for two or three weeks to assess whether I would need to have a pacemaker implanted. I had to get better working conditions than I had.

I conspired with the ward nurse to clear a desk in the disused office where my internet connection worked. I was wearing a portable pacemaker and not allowed to leave the ward. Much final writing of the West Africa book took place there – in a bleak room without distractions. A pacemaker was eventually implanted when it became clear that my heart's own electrical system would remain erratic. I was duly discharged after a month.

Two months after the operation the chest pains had largely disappeared and I was cleared to go to Nairobi for a month to do the photography for the West Africa book at the African Butterfly Research Institute (ABRI). Before that, my sister and I spent a most pleasant weekend with Peder Skou, the owner of Apollo Books in southern Funen. Though he has already published my book on the *Butterflies of Egypt*, we had never actually met.

My condition had not allowed me fully to test my recently purchased camera and flash equipment and I never managed to set it up for easy photography in Nairobi. The LED display was not really good enough for precise focusing, so I took three pix of each specimen and spent every evening selecting the best and identifying those that would need re-photographing. I could not control colour balance, nor could I make the background evenly pure white. My new CD-ROM drive ended up with 15,000 raw pictures – the book ended up with about 3,900 of these (more than 1,400 species), all of which needed Photo-shopping back in Hanoi. Back at the Natural History Museum in London I only had to photograph or re-photograph some 70 species. Without the heart interlude and the loss of time to experiment the plates of the book would certainly have been better – a somewhat feeble excuse. On the other hand, the operation went well. The lady who checked me out with an echo-scan said that the valve repair was one of the best she had ever seen – and so did a London cardiologist just a month ago. When I checked out I was told the pacemaker battery would work for at least six to seven years . . . that was upped to 12 years in all just last month. I wish they could make computer batteries like that!— TORBEN B. LARSEN, 358 Coldharbour Lane, London SW9 8PL (E-mail: torbenlarsen@btinternet.com).

Papilio machaon L. (Lep.: Papilionidae) in East Sussex

At about 12.45 hours on 22 August 2009, I was more than a little surprised to see an example of *Papilio machaon*, presumably the continental subspecies *gorganus* Fruhstorfer, fly across a friend's garden in the village of Robertsbridge, East Sussex (Vice-county 14). Although the possibility of a deliberate release cannot be ruled out, the village is only 10 miles from the south coast and as this taxon has most frequently been seen in July or August, there is a strong likelihood that it was a genuine migrant.— ROBERT W. BOGUE, 2 Rose Cottages, Lydford, Devon EX20 4AW (E-mail: robbogue@aol.com).

A wider British distribution for *Scythris inspersella* (Hb.) (Lep.: Scythrididae)

The recent note by Tony Pritchard (*antea*: 166) recording *Scythris inspersella* in East Suffolk gives the impression that British records of this moth are restricted to East Anglia.

This is not so, it was first recorded in South-east Yorkshire (VC 61) at Allerthorpe Wood on 30.vii.2001 by E. D. Chesmore, with further records in subsequent years by myself and others showing that it was resident at this site. Then, on 17.vii.2004, a specimen was found in South-west Yorkshire (VC 63) at Bawtry Forest by R. I. Heppenstall and myself. The initial records from these two sites are included in the relevant *Microlepidoptera Reviews* published in this journal (*Entomologist's Rec. J. Var.*, 114:278 and 117:245).— HARRY E. BEAUMONT, 37 Melton Green, West Melton, Rotherham, South Yorkshire S63 6AA.

A new larval foodplant for *Coleophora albitarsella* (Zell.) (Lep: Coleophoridae)

In our small garden in Lower Stondon, Bedfordshire (VC 30), we grow a number of mint *Mentha* species and other herbs such as Marjoram *Origanum vulgare* and Thyme *Thymus* sp. In addition, for a number of years there has been a clump of Lemon Balm *Melissa officinalis*.

On 19 September 2005, I found a coleophorid case attached to the underside of one of the leaves of this latter plant species. I e-mailed a photograph of the case to David Manning, the county micro-moth recorder for VC 30 and to John Langmaid; both said that *C. albitarsella* was the most likely candidate. Reading the species account in (Emmet, A.M., 1996, *The Moths and Butterflies of Great Britain and Ireland*, Vol. 3. Harley Books) I found that there is only one case that is added to as the larva grows with feeding from late August to the autumn and again after hibernation in the spring from March to May. However, though the earlier stages are described only the final stage of the case is illustrated.

On 16 June 2006, many cases that appeared to be this species were found in the garden, mostly on Mint and Marjoram but also again on Lemon Balm. One of the latter was collected and bred through to adult whereupon it was despatched to David Manning who confirmed it to be *albitarsella*.

Many species of foodplant are listed for *C. albitarsella* including mints, Marjoram and other *Labiatae* similar to Lemon Balm such as Woundwort *Stachys* sp., but this species is not itself listed. E-mails to Colin Plant and Rob Edmunds confirmed that they did not have this listed as a foodplant on the comprehensive list of mined plants at www.leafmines.co.uk/html/plants.htm (accessed September 2009) and Rob subsequently mentioned the record in one of the leaf-miner website newsletters. It just goes to show that we can still add new foodplants for common species; however it is important to breed these through to adult in order to prove the identification.

Thanks are due to the correspondents mentioned above and also a great deal of credit should go to all those involved in the British Leaf-miners website (www.leafmines.co.uk). Regular newsletters of news in the leaf-miner world are posted on the website also.— ANDY BANTHORPE, 32 Long Close, Lower Stondon, Bedfordshire SG16 6JS.

***Valenzuela atricornis* (McLachlan) (Psocoptera, Caeciliusidae) new to Devon and the South West**

A single specimen of the distinctive barkfly *Valenzuela atricornis* was beaten from a patch of dense rushes alongside some ponds in the coastal valley of Starehole Bottom, Malborough, South Devon (O. S. grid reference SX 7236), 9.viii.2009. This is a rare species throughout much of its British range and has not previously been reported from Devon or any neighbouring county and is therefore new to the South West of England (www.brc.ac.uk/schemes/barkfly/). In the experience of the author, this species is most frequently encountered in tall wet fen vegetation dominated by reeds or rushes, although does also occur in other long-established semi-natural situations such as calcareous grasslands where the vegetation structure is relatively tall and dense.— KEITH N. A. ALEXANDER, 59 Sweetbrier Lane, Heavitree, Exeter EX1 3AQ (Email: keith.alexander@waitrose.com).

***Phyllonorycter coryli* (Nicelli) (Lep: Gracillariidae) feeding on *Ribes sanguineum* — a new food plant**

While looking at hedgerows at Kingfishers Bridge, Cambridgeshire on 23 June 2009, I spotted a *Phyllonorycter* mine on Flowering Currant *Ribes sanguineum*. It looked intact and, using a ×10 hand lens, frass could be seen within. I bagged it up and later, at home, looked on the British Leaf Mines website (www.leafmines.co.uk) in an attempt to identify it. Reference to the comprehensive host-plant list of British Isles leaf miners, prepared by Colin Plant and Brian Pitkin and hosted on this web site, revealed that no leaf-miner of any insect Order was listed for *Ribes*.

On the Leaf-mines of Europe website (www.bladmineerders.nl), *Phyllonorycter ulmifoliella* (Hb.) is given as an occasional user of *Ribes* in Europe, so I posted photos of the mine on the UK Leaf miners forum indicating that *P. ulmifoliella* was a possibility. Rob Edmunds advised me to breed it through, hoping it was not parasitised.



Figure 1. Mine of *Phyllonorycter coryli* (Nic.) on leaf of *Ribes sanguineum*.



Figure 2. *Phyllonorycter coryli* (Nic.) – pupal cremaster.

I opened the mine next day to check whether the pupa was alive; it was, wriggling frantically, rendering attempts to photograph the cremaster difficult. The adult emerged on 30 June 2009 and from photos of the cremaster and imago, Rob Edmunds confirmed my tentative identification of *P. coryli*. As far as I am aware this is a new foodplant for this species.

My thanks go to Rob Edmunds for his help.— IAN BARTON, 7 Cage Lane, Stretham, Ely, Cambridgeshire CB6 3LB (Email: kandi@waitrose.com).

Anomalon cruentatum (Goeffroy) (Hym.: Ichneumonidae) in north Kent

During the afternoon of 17 August 2009 I walked the length of the South Swale Site of Special Scientific Interest (SSSI) from the Olde Sportsman Inn near Seasalter to Nagden Marshes near Faversham and recorded insects within seven 1-km grid squares. Wild Carrot *Daucus carota* was abundant and from the umbels eleven females of *Anomalon cruentatum* (Geoffroy) were taken. The data are: Graveney Marshes, O. S. grid reference TR 0564, seven females; Cleve Marshes, TR 0464, three females; Nagden Marshes, TR 0364, one female. On examining my backlog of unidentified Ichneumonidae I discovered a further two females taken at House Fleet, Grain TQ 87957505, on 13 August 1997.

Claude Morley (1914. *The Ichneumons of Great Britain V: Ophioninae*. i-x, 1-400. H. & W. Brown) re-described and illustrated the species as *Nototrachys foliator* Fab. on pages 262-264 and stated ‘Marshall in 1872 considered this species as doubtfully British; and all our authors seem to have overlooked the only definite indigenous record, which is to be found in Abel Ingpen’s

'Instructions,' 1839, p. 62, where Southend in Essex is given as the local habitat of '*Trachynotus soleator*' and Desvignes' three females, in the National Collection as early as 1856, may have originated there; it was known to Westwood in 1840'.

As Gauld & Mitchell (1977. Hymenoptera Ichneumonidae (Part) Orthopelmatinae & Anomaloninae. *Handbooks for the Identification of British Insects* VII. 2(b) 1-29) stated 'This species is a parasite of tenebrionid larvae; it is primarily a Mediterranean insect but occasional specimens have been taken in southern England. It is not thought to be established in this country.' I contacted Gavin Broad at the Natural History Museum, London in order to ascertain any other data. He replied that the only material in the NHM are the Desvignes' specimens, mentioned by Morley; no British *Anomalon* are present in the National Museums of Scotland, Edinburgh (Mark Shaw, pers. comm). Furthermore Desvignes' specimens were simply labelled 'British Isles'. Therefore, while *Anomalon cruentatum* is widespread in Europe (www.faunaeur.org, accessed 17 September 2009), the known British records are from three areas along the Thames Estuary.— LAURENCE CLEMONS 14 St. John's Avenue, Sittingbourne, Kent ME10 4NE.

Water Betony *Shargacucullia scrophulariae* ([D.&S.], 1775) (Lep.:Noctuidae) on Guernsey: a postscript

Following the publication in this journal of the paper I wrote in 2007 with Dr Phil Sterling on the Water Betony (*Ent. Rec.*, 119: 97-102), I received two interesting and encouraging e-mail messages. The first was from Rich Austin, the Guernsey recorder, reminding me that he had a specimen of what he thought was the Water Betony in his own collection. Very generously Rich made this available to us and in May 2009 Phil travelled to Guernsey to dissect it. Although the specimen had every appearance of Water Betony, disappointingly on dissection it proved to be the Mullein *Shargacucullia verbasci* (L.), confirming just how difficult it can be to distinguish these two species on external appearance.

The second message was from Martin Honey, Curator of Lepidoptera at the Natural History Museum, who wrote quite rightly taking me to task for claiming that our records of Water Betony were the first for the Channel Islands. They were not. Martin pointed out that while our specimens were undoubtedly the first to be confirmed by dissection, it was not true to say that they were the first records for the islands as Water Betony was included on a list of species recorded on Guernsey, by a Miss Wilkinson, which had been published in 1862 in Ansted and Latham's *The Channel Islands* (W. H. Allen & Co., London). This was a publication I had overlooked. Interestingly, in his seminal work *Channel Islands Lepidoptera* (2008, privately published) the late Michael Shaffer considers these early records to have possibly been misidentifications of the Mullein.— P. D. M. COSTEN, La Broderie, La Claire Mare, St. Peter's, Guernsey GY7 9QA (pcosten@guernsey.net)

**TWO NEW MACROLEPIDOPTERA GENERA AND FIFTEEN NEW
MACROLEPIDOPTERA SPECIES FOR THE REPUBLIC OF
MONTENEGRO (CRNA GORA, BALKAN PENINSULA), COLLECTED
IN DURMITOR NATIONAL PARK, TARA CANYON
(LEP.: GEOMETRIDAE, NOCTUIDAE)**

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Abstract

Fifteen species and two genera of Lepidoptera (Noctuidae and Geometridae) are reported as new to the fauna of Montenegro during a collecting trip from 10 – 17 July 2001.

Keywords: Balkan Peninsula, Montenegro, Crna Gora, Noctuidae, Geometridae, new faunal records

Introduction

During the period 10 to 17 July 2001, I spent eight nights collecting Lepidoptera in the Durmitor National Park, Montenegro, concentrating efforts at the Tara Canyon, in the vicinity of Tepca Village, UTM code CN48 (Fig. 1). On each night I collected in a different locality using a 160 watt lamp and a 15 watt actinic tube. This collecting trip is briefly described in Bulgarian by Beshkov (2002).

Results of the survey

On the left bank of the Tara River near Tepca Village (Plate 34: 1, the school) the Lepidoptera fauna is mostly boreal. I collected here on two nights 10 July and 15 July 2001, at an altitude of about 680 metres above sea level (m.a.s.l.). The many species here included five species new for the Republic of Montenegro, in the form of *Acronicta cuspis* (Hübner, [1813]) – Gen. prep. 3./27.i.2006, S. BESHKOV, male genitalia with everted vesica (Figs 1 & 2), *Acronicta auricoma* ([Denis & Schiffermüller], 1775), *Mythimna impura* (Hübner, [1808]), which was reported recently as a new for Serbia by Stojanovic (2002), *Chersotis rectangula* ([Denis & Schiffermüller], 1775) and *Noctua tirrenica* (Biebinger, Speidel & Hanigk, 1983). Other numerous species here were *Lygris pyraliata* ([Denis & Schiffermüller], 1775), *Selenia tertalunaria* (Hufnagel, 1767), *Drymonia oblitterata* (Esper, [1785]), *Euplagia quadripunctaria* (Poda, 1761) (Species from Appendix II of the EEC 92/43 Habitat Directive), *Catocala fulminea* (Scopoli, 1763), *Calliergis ramosa* (Esper, [1786]), *Brachylomia viminalis* (Fabricius, 1777), *Hyppa rectilinea* (Esper, [1788]), *Apamea sublustris* (Esper, [1788]), *Euplexia lucipara* (Linnaeus, 1758), *Caradrina suscianja* (von Mentzer, 1981), *Melanchra persicariae* (Linnaeus, 1761), *Lacanobia contigua* ([Denis & Schiffermüller], 1775), *Diarsia mendica* (Fabricius, 1775), *Anaplectoides prasina* ([Denis & Schiffermüller], 1775) and *Eugrapha sigma* ([Denis & Schiffermüller], 1775) amongst others.



Plate 34. View to Tepca Village and Tara Canyon from Curevac. 1. – Tepca Village, the School, 680m.; 2. – Devojacki Most Bridge, 560 m (below the number); 3. – the cave above Devojacki Most Bridge, 735 m.; 4. – above Devojacki Most Bridge, 680m; 5. – Dzabasanska Gradina Hill, 780m.

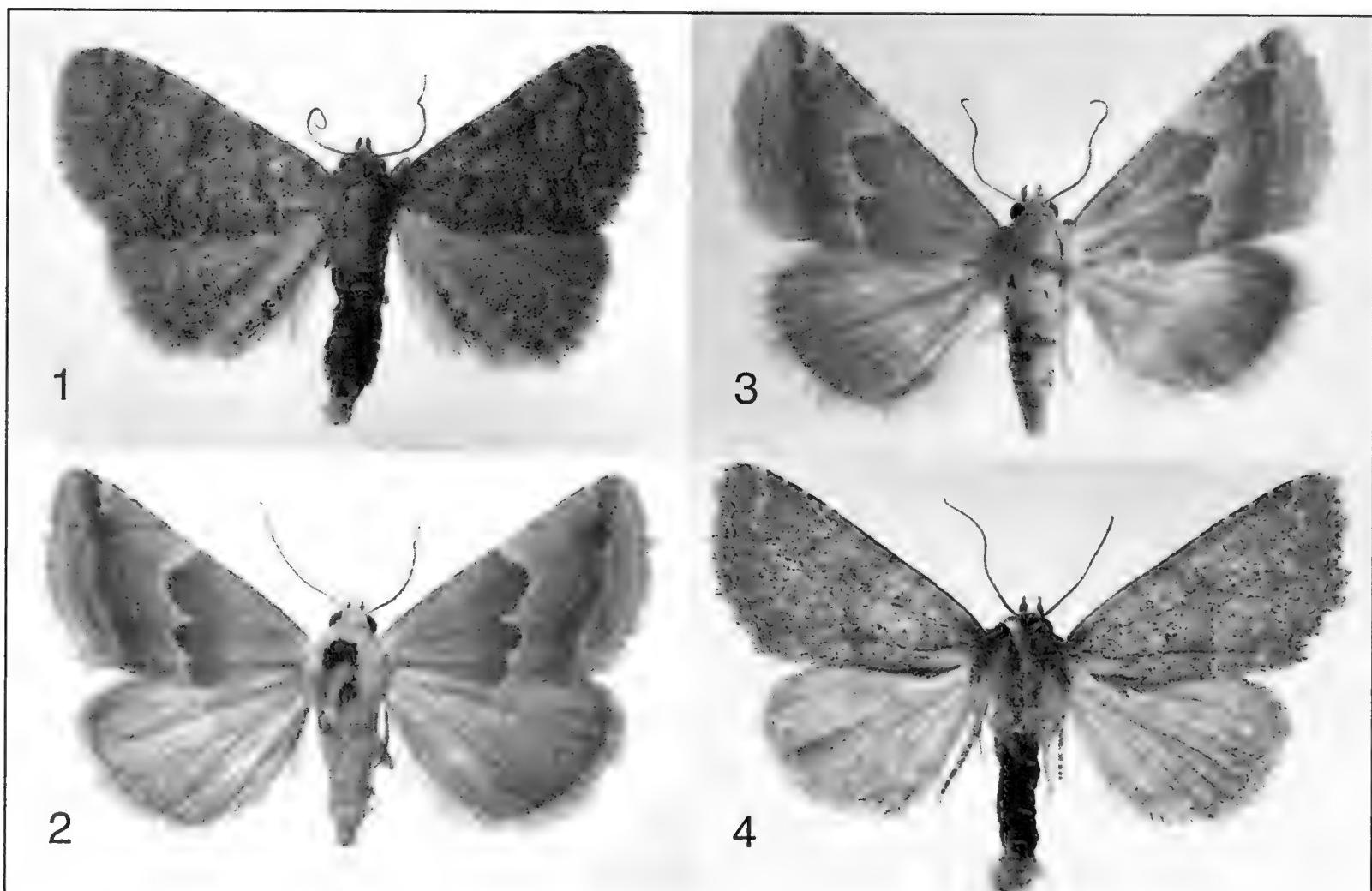


Plate 35: **Figure 1.** *Metachrostis dardouini* (Boisduval, 1840), male, Dzabasanska Gradina Hill, 780m, 14.VII.2001. **Figures 2-3.** *Eublemma rosea* (Hübner, 1790), males, near the cave above Devojacki Most Bridge, 735m, 12.VII.2001. **Figure 4.** *Heterophysa dumetorum* (Geyer, [1834]), male, near the cave above Devojacki Most Bridge, 735m, 12.VII.2001.

In nearly the same locality, but at a different altitude, at 800 – 820 m.a.s.l.) I collected on 16 and 17 July 2001. Species collected there included two more new to Montenegro, in the form of *Zanclognatha zelleralis* (Wocke, 1850) (reported recently as a new for Serbia by Dodok (2003) and *Amphipyra tetra* (Fabricius, 1787) as well as *Ptilodon cucullina* ([Denis & Schiffermüller], 1775), *Phytometra viridaria* (Clerck, 1759), *Pyrrhia umbra* (Hufnagel, 1766) and *Dichagyris signifera* ([Denis & Schiffermüller], 1775) – none of which were present at the first site.

The night of 14 July was spent collecting on the same slope of the valley in a different-looking area at Dzabasanska Gradina Hill above Tepca village, 780m, UTM code CN48 (Plate 34: 5). Here I encountered *Metachrostis dardouini* (Boisduval, 1840) (Plate 35, Fig. 1), *Amphipyra berbera svenssoni* Fletcher, 1968 and *Apamea syriaca* Ostheder, 1933, all new to the fauna of Montenegro), along with *Catephia alchymista* ([Denis & Schiffermüller], 1775), *Eutelia adulatrix* (Hübner, [1813]), *Chrysodeixis chalcites* (Esper, [1789]), *Caradrina suscianja* (von Mentzer, 1981), *Eugrapha sigma* ([Denis & Schiffermüller], 1775), *Yigoga nigrecens* (Höfner, 1888) and *Chersotis multangula* (Hübner, [1803]).

Other three nights I collected on right-hand side of the valley, as one of the collecting localities there was close to the river. First, on 11 July 2001 I trapped at Devojacki Most Bridge (Plate 34: 2), 560 m.a.s.l., UTM code CN48) close to the river. This generated a list not diussimilar to that from the left bank, but with the addition of *Charissa certhiatus* (Rebel & Zerny, 1931) new to Montenegro as well as (*Marumba quercus* ([Denis & Schiffermüller], 1775), *Schisostege decussata* ([Denis & Schiffermüller], 1775), *Lygephila viciae* (Hübner, [1822]), *Abrostola asclepiades* ([Denis & Schiffermüller], 1775), *Chersotis multangula* (Hübner, [1803]), *Conisania luteago* ([Denis & Schiffermüller], 1775) and *Dichagyris renigera* (Hübner, [1808]).

The next two nights I collected higher on the right slopes above the Tara River. On 12 July 2001 the locality was close to the cave above Devojacki Most Bridge, at 735 m a.s.l., UTM code CN48) (Plate 34: 3). This is steep limetone scree slope with *Acer monspesulanum*, *Galium* and grass-dominated vegetation. The Lepidoptera species composition there was very different to that on the other riverside, with *Paradrymonia vittata streckfussi* (Honrath, 1892), *Charissa certhiatus* (Rebel & Zerny, 1931), *Gnophos furvata* ([Denis & Schiffermüller], 1775), *Rhodostrophia calabra* (Petagna, 1786), *Glossotrophia confinaria* (Herrich-Schäffer, 1847), *Phalera bucephaloides* (Ochsenheimer, 1810), *Eublemma rosea* (Hübner, 1790) (Plate 35 Figs 2 & 3), *Idia calvaria* ([Denis & Schiffermüller], 1775), *Lamprosticta culta* ([Denis & Schiffermüller], 1775), *Mesoligia literosa literosa* (Haworth, 1809) (Reported as a new for Montenegro from Biogradska Gora National Park, Bjelasica Mts by Beshkov (2004), *Sideridis lampra* (Schawerda, 1913), *Dichagyris nigrescens* (Höfner, 1888), *Euxoa decora* (subspecies identity not established), *Meganola strigula/kolbi* and others. In addition, I caught examples of a subspecies of *Dichagyris renigera* that resembles ssp. *argentina* (Caradja, 1930), which is thought to be endemic to the Black Sea

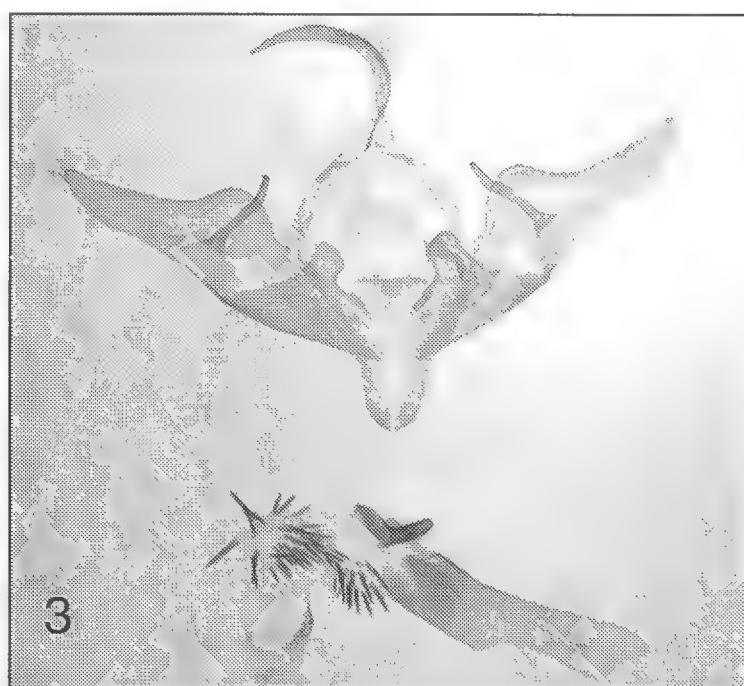
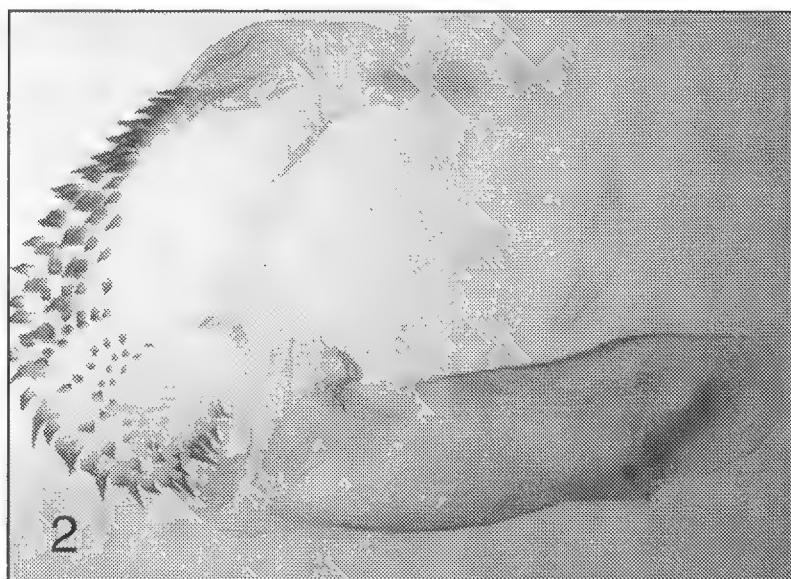
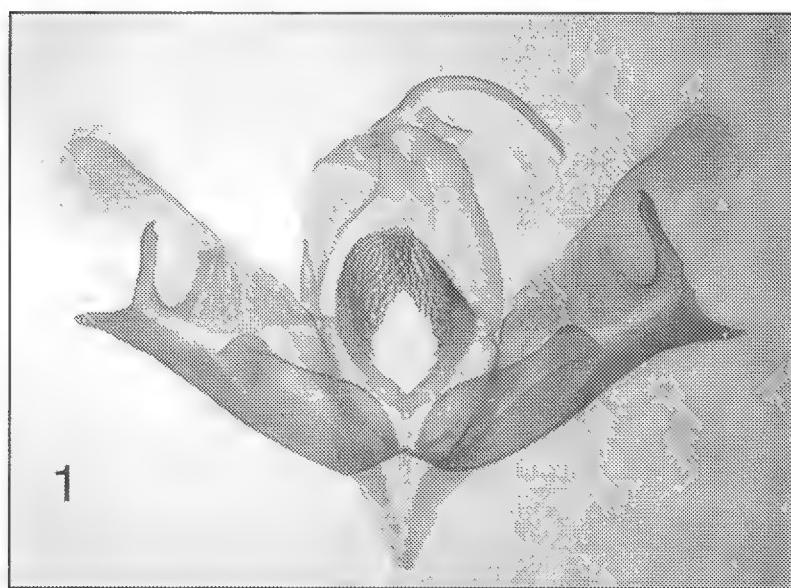
Coast of Bulgaria (the “Silver Coast” around Balchik). It appears quite different from the nominotypical *D. renigera renigera* and its form *renigera ochridana* Thurner, 1936),

On 13 July 2001 I collected again on the right shore above Devojacki Most Bridge, near Tepca village at 680 m.a.s.l., UTM code CN48, (Plate 34: 4) but in different locality and habitat – a rocky area near forest and scrub. More interesting species there were: *Paraboarmia viertlii* (Bohatsch, 1883) – (a new genus and a new species for Montenegro) plus *Lygephila procax* (Hübner, [1813]) and *Caradrina aspersa* Rambur, 1834 – both new species for Montenegro, as well as *Charissa certhiatus* (Rebel & Zerny, 1931), *Abrostola agnorista* Dufay, 1956 (Gen. prep. 1./27.I.2006, S. Beshkov, male genitalia with everted vesica (Fig. 3), *Eublemma rosea* (Hübner, 1790), *Metachrostis dardouini* (Boisduval, 1840), *Caradrina suscianja* (von Mentzer, 1981), *Oligia versicolor* (Borkhausen, 1792) (Gen. prep. 5./01.II.2006, S. Beshkov, female genitalia). The apparently unnamed subspecies of *Dichagyris renigera* mentioned above was also found here.

Heterophysa dumetorum (Geyer, [1834]), representing a new genus and new species for Montenegro, was also collected in the Durmitor National Park. The data are: Tara Canyon, opposite Tepca Village, near the cave above Devojacki Most Bridge, 735m, 12.VII.2001, leg. and in coll. S. Beshkov, 1 male (Plate 35, Fig. 4), gen. prep. 10./07.III.2005, S. Beshkov, genitalia (Fig. 9) with everted vesica (Figs 5 & 6) and last abdominal segments; and above Devojacki Most Bridge, 680m, 13.VII.2001, leg. and in coll. S. Beshkov, 1 male, gen. prep. 9./07.III.2005, S. Beshkov, genitalia with everted vesica and last abdominal segments. The genus *Heterophysa* Boursin, 1953 is monotypic one represented by the nominotypical subspecies and ssp. *mutica* Christoph, 1885 (Figs 7-13). According to Calle (1982) in Spain *Heterophysa dumetorum dumetorum* is very rare and local, known from the north-east part of the country at Valle de Arán and Siera de Guara. In France it is known from the south (Le Agentiere, 1000 m.a.s.l.) (Calle, 1982: 380, *op. cit.*), from Provence (Type locality) and from Cote d’Azure (Cannes). Flamigni (2001), reported *Heterophysa dumetorum* from Central Italy. Outside Europe *Heterophysa dumetorum* (ssp. *mutica* Christoph, 1885) is known from Caucasus (T.l.: Odroubad), Transcaucasia, Russian Turkestan, Turkey, Syria and Iran. Male genitalia of both subspecies are illustrated in Boursin (1952) This, which is illustrated in Calle (1982: 407, *op. cit.*) must represent the nominotypical subspecies *Heterophysa dumetorum dumetorum*. Modern opinion, however (Fibiger & Hacker, 2007) is that the eastern subspecies *mutica* Christoph is synonymous with the nominate subspecies. In Fibiger & Hacker (*op. cit.*) *Heterophysa dumetorum* is reported for first time from the Balkan Peninsula (Kosovo and central northern Greece), but without any other additional data. The everted male vesica and the female genitalia are illustrated. Here male genitalia with everted vesica are illustrated as well, but in several different projections. The presently reported locality thus represents the first with supporting data for the Balkan Peninsula.

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Figures 1-2. *Acronicta cuspis* (Hübner, [1813]), male, Tepca Village, the School, 680m, 15.VII.2001 – Gen. prep. 3./27.I.2006, S. BESHKOV. 1. – genital armature; 2. – everted vesica. **Figure 3.** *Abrostola agnorista* Dufay, 1956 (Gen. prep. 1./27.I.2006, S. BESHKOV, male genitalia with everted vesica), above Devojacki Most Bridge, 680m, 13.VII.2001. **Figure 4.** *Heterophysa dumetorum* (Geyer, [1834]), Gen. prep. 10./07.III.2005, S. Beshkov, male – near the cave above Devojacki Most Bridge, 735m, 12.VII.2001. Genital armature.

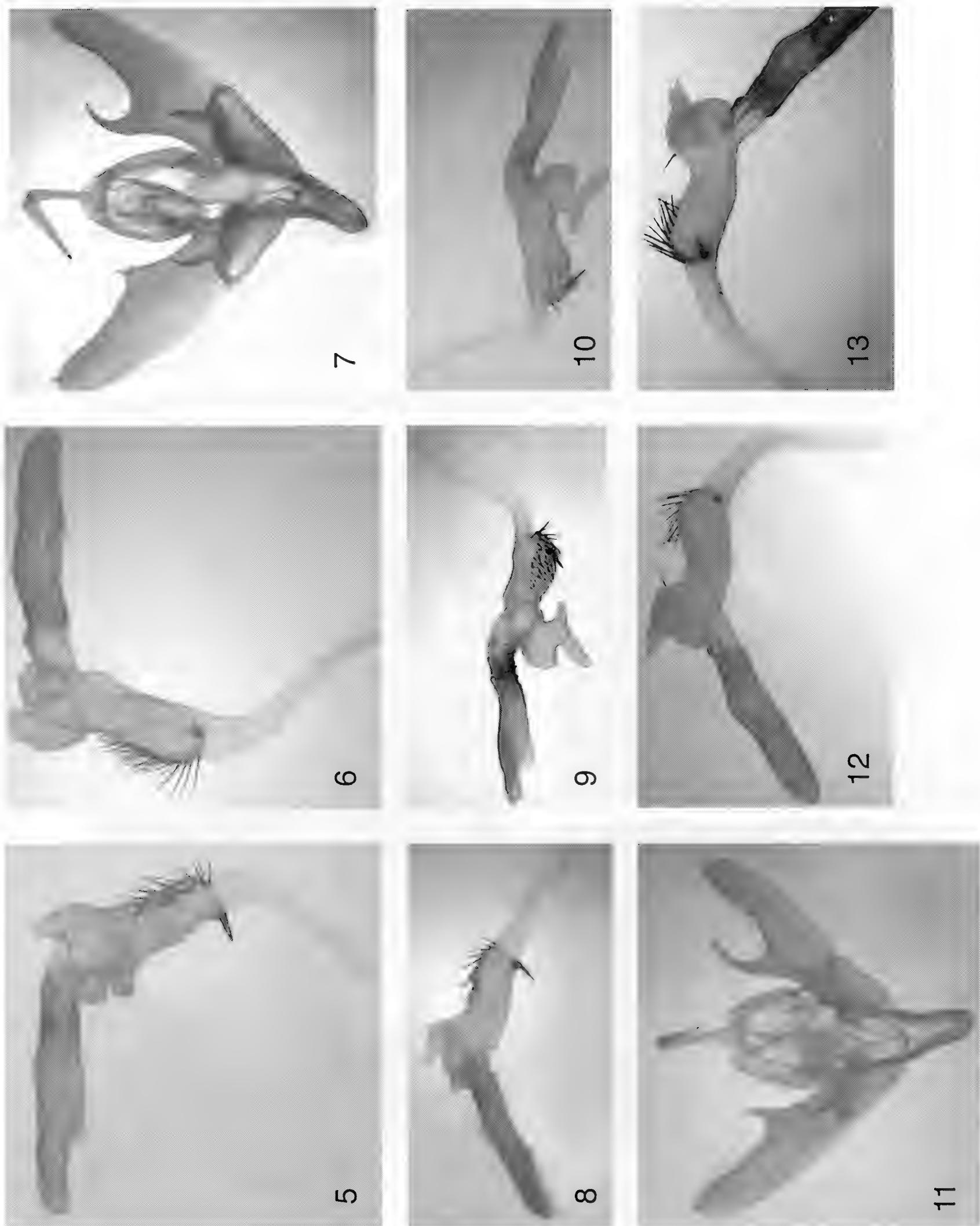


Figure 5-6. *Heterophysa dumetorum* (Geyer, [1834]), Gen. prep. 10.07.III.2005, S. Beshkov, male – near the cave above Devojacki Most Bridge, 735m, 12.VII.2001. Everted vesica. **Figures 7-10.** *Heterophysa dumetorum mutica* (Christoph, 1885), Gen. prep. 12.07.III.2005, S. Beshkov, NE Turkey, Karadeniz Daglari, Prov. Artvin, Above Sarigöl Village, 22 km on the road from Yusufeli, 945m, 16.VII.1995, S. Beshkov leg. 7. – genital armature; 8, 9 & 10, everted vesica. **Figures 11-13.** *Heterophysa dumetorum mutica* (Christoph, 1885), Gen. prep. 13.07.III.2005, S. Beshkov, Turkey, Asia Minor, Sultan Dagh, 10 km after Aksehir, 26.VI.1996, S. Abadjiev leg. at light trap. in coll. S. Beshkov. 11 – genital armature; 12, 13 – everted vesica.

Lyonetia clerkella* (L.) (Lep.: Lyonetiidae) on Hop *Humulus lupulus

A gentle walk through the beautiful lanes of Stody, Norfolk (O. S. grid reference TG 057351; VC 28), on the sunny Saturday afternoon of 12 September 2009 taking in the scenery and commenting that the hills looked more like something from the Yorkshire Dales (don't let anyone tell you all of Norfolk is flat) I took time to search a section of a hedgerow with hop *Humulus lupulus* growing amongst beech *Fagus sylvatica* for approximately 200 metres. My efforts concentrated on searching for *Cosmopterix zieglerella* (Hb.) and after considerable searching found just a scattering of vacated mines – so providing the most northerly siting of this species in Norfolk. What also took my eye was the presence of two mines of *Lyonetia clerkella* on the hop leaves. As this appeared to be a new (an unexpected) foodplant, I contacted Rob Edmunds and Colin Plant; neither of them had heard of this food plant being used before. This, therefore as far as we know, is the first time Hop has been utilized by this species.— JON CLIFTON, Kestrel Cottage, Station Road, Hindolveston, Norfolk (E-mail: jon.clifton@btinternet.com).



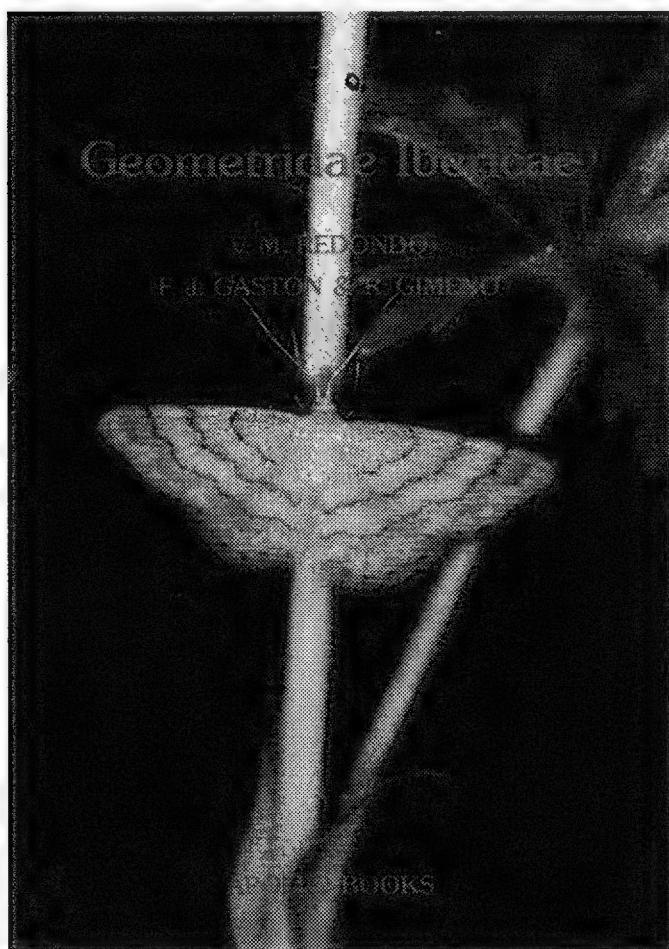
Plate 36. Larval mine of *Lyonetia clerkella* (L.) on leaf of Hop, *Humulus lupulus*, Stody, Norfolk, 12.ix.2008. J. Clifton.

A mine of *Lyonetia clerkella* (L.) (Lep.: Lyonetiidae) on Hop *Humulus lupulus*

On searching a road-side hedgerow at Whiston (O. S. grid reference SP 8560) in Northamptonshire (VC 32) on 27 August 2009, along a thirty yard stretch of hop *Humulus lupulus*, the only leaf-mine I found was a single vacated mine of *Lyonetia clerkella* (L.). This appears to represent a previously un-recorded plant family for this leaf-miner, since neither of the two species of Cannabaceae found in Britain (*Humulus lupulus* and *Cannabis sativa*) are listed as a foodplant in the comprehensive list of mined plants by Colin Plant and Brian Pitkin at www.leafmines.co.uk/html/plants.htm, accessed 21 September 2009.— DAVID MANNING, 27 Glebe Rise, Sharnbrook, Bedford MK44 1JB.

BOOK REVIEWS

Geometridae Ibericae by V. M. Redondo, F. J. Gastón & R. Gimeno. 361 pp., including 17 colour plates, 589 distribution maps and 34 pages of genitalia drawings. Bilingual (Spanish & English). 295 x 210 mm, hardbound, ISBN: 978-87-88757-81-1. €140. Apollo Books, 2009. Available from the publishers at Kirkeby Sand 19, DK-5771 Stenstrup, Denmark or online at www.apollobooks.com.



At last – the only slightly overdue, but long-awaited volume on geometers in Spain and Portugal. The moth fauna of Spain is one of the most important in Europe, with a staggering 507 endemic species (those not found in any other country of the world). Unsurprisingly, the Mediterranean Region supports a greater diversity of moth species than Central or Northern Europe: In all, 4623 moth species are to be found in the Iberian Peninsula (Spain and Portugal together), compared with 5088 in the Balkan Peninsula and 4614 in Italy, but when land area is taken into account, Iberia is shown to support 8.1 species per 1000 square kilometres compared with only 7.1 in the Balkans. How unfortunate then that Spain has such draconian anti-collecting laws (happily, Portugal is more conservation conscious). Data on Spanish moths have been accumulated through field work largely on the part of Spanish

entomologists, who will probably find it easier to apply for research permits, but a significant contribution has also been made by visitors from Denmark, Hungary, Britain and elsewhere; these will find it that much harder to get collecting permission and the overall decline in data over time is already becoming noticeable. It is pleasing then to see that this new volume is bilingual (Spanish and English) – in recognition that the scientific community as a whole, not just a few native Spaniards, has a genuine interest in Iberian biodiversity.

There is a thought-provoking Foreword by Axel Hausmann, discussing the scientific need for collecting. The introductory section is excellent, describing the different topographical areas of the Iberian Peninsula, showing structural features, climatic zones and main mountain ranges amongst other useful stuff. The Systematic Accounts are brief, but to the point. The distribution maps may show under-recording rather than true distribution, but then that is why this book is so necessary (and why the anti-collecting laws should be at least eased if not abolished altogether). Also within the 361 large pages may be found 17 colour plates showing photographs of half moths (the right-hand half) of the 589 species to be found in Spain, Portugal and the Balearic Islands. A further 43 species whose presence in the region is regarded as doubtful are discussed, but not illustrated. The text treats each species more or less equally, under the five sub-headings of 'Wingspan', 'Diagnosis', 'Biology', 'Distribution' and 'Comments'.

The colour plates are of good quality. Opinions and preferences will vary, of course, but in my own view the *Idaea* and *Eupithecia*, at least, would have benefited with being reproduced at slightly more than life size. The colours of some of the paler moths seem to sink into the white background page colour; this could have been so much better if a tinted background had been used as has become the norm in most moth books (including others from Apollo).

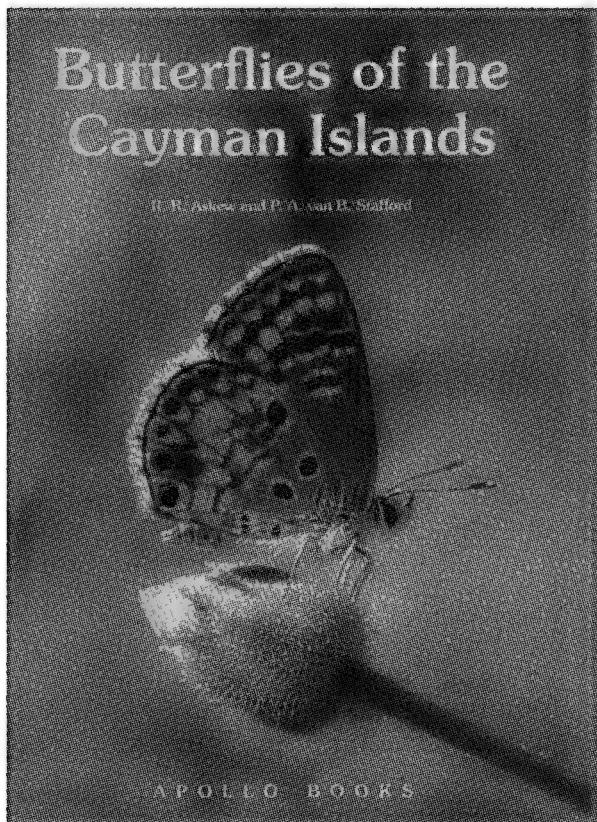
A few typos occur from time to time in the English text, such as 'recente' instead of 'recent' on page 68, but these are just minor points. The only real disappointment is in the genitalia section. Much space has been wasted repeating the genitalia for some of the species already illustrated in the Apollo Books series *The geometrid moths of Europe* whilst species that we really could have done with are absent. The space could have been better used (and there is a lot of wasted space at the bottom of most of the pages of colour plates), to illustrate a greater range of species that are difficult to separate on gross morphological characters. Books for people who don't need books are pointless; the rest of us want to know how to recognise the different species. Although the genitalia figures themselves are of a very high standard, the selection of species for inclusion appears to have been done entirely at random – and even when a species is illustrated, it is entirely pot-luck whether male, female or both sexes are drawn. Thus, we have female *Eupithecia virgaureata* and *Epirrita autumnata* but no male for either (for *Epirrita* we are told 'for males, just brushing the underside of the abdomen is sufficient for identification'. What ever could this mean?). There are other examples. Additionally, there is no mention in text of the critical genital features – we are generally left to look at the picture and work it out for ourselves, which is not always a good idea.

I don't want to be too critical. I know that Peder Skou at Apollo Books has put in an inordinate amount of time and effort to knock into shape the material with which he was provided by the authors and the end result is an important volume that will be of immense value to anyone who has any interest at all in the geometrid moths of Spain, Portugal or the Balearic Islands.

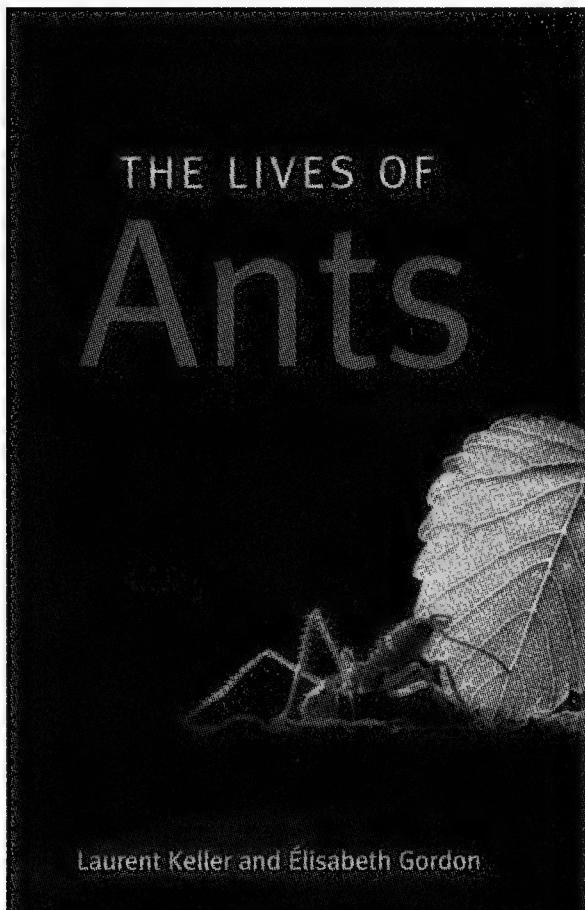
Colin W. Plant

Also received ...

Butterflies of the Cayman Islands by R. R. Askew, and P. A. van B. Stafford. 169 pp., including 6 colour plates with 119 colour photographs, maps and other figures. 245 x 175 mm, hardbound, ISBN: 978-97-88757-85-9. Apollo Books, 2008. £38 (€47).



Though some may know of them as a UK tax haven lying in the Caribbean Sea south of Cuba and west of Jamaica, it is unlikely that the great majority of readers of this journal will have been to the Cayman Islands. On that basis, this book may have a limited appeal – though it nevertheless provides an important record of the butterfly fauna of these coral limestone islands. It is evident from the introductory chapters that the intended audience is a general one rather than specialist entomologists, but nevertheless the photographs (of living butterflies and set specimens) provide for accurate identification of the 57 species to be found on the three islands (52 on Grand Cayman, 31 on Little Cayman and 34 on Cayman Brac) whilst there are also helpful guides to places where different species might be found.



The lives of ants by Laurent Keller and Élisabeth Gordon (English version, translated by James Grieve). 252 pp., 223 x 145 mm, hardbound, ISBN: 978-0-19-954186-7. Oxford University Press, 2009. £14.99.

With chapter headings that include 'Nowt so rum as ants' one might be forgiven for thinking that the authors are Yorkshire rather than French! This is an excellent little volume – one of those 'everything that you want to know about ...' type books that will make an excellent Xmas present (yes – I said the X word and it is only September!). The text is aimed, perhaps, at an educated general audience; there is none of the dumbing down we see so frequently in general texts from America and increasing from here in Britain. There is also a good section on 'Further Reading' (which includes a number of web sites). A good read for the coffee table/bathroom/bedside – well worth the fifteen quid asking price.

AES Publications

Amateur
Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

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Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988) £ 3.10

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A Coleopterist's Handbook

Edited by J.Cooter & M.V.L.Barclay The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

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A Silkmoth Rearer's Handbook by B.O.C. Gardiner

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A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996) £ 14.20

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Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980) £ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003) £ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982) £ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001) £ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and

describe them. 422 pages. Hardback. (Reprinted 1994).

£ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996) £ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999)

£ 18.90

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Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition – 2001)

£ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003)

£ 7.40

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The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival.

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Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951)

£ 1.05

Members price £ 0.90

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20 pages. (Revised 1981)

£ 2.35

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Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000)

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12 pages (including 2 plates). (1946)

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Members price £ 1.75

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16 pages, 15 figures. (1973)

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16 pages, 1 plate, 10 figures. (1974)

£ 2.55

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12 pages, 2 plates. (1986) (Reprinted 1993)

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The Entomological Record and Journal of Variation

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Notes are reviewed and accepted by the Editor and are especially welcomed. We aim to publish these within two issues of acceptance.

Full papers must include an Abstract and a maximum of ten Key Words and acceptance is subject to external peer-review; full papers may be returned for changes before final acceptance and we aim to publish these within three or four issues of original receipt.

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Long Term Change in a Brecknock Moth Population

This note is on a similar theme to that of Fletcher published in this journal (*antea*: 109–118), but features data from the opposite side of the UK.

Fred Slater of the Llysdinam Field Centre at Newbridge-on-Wye in northern Brecknock, Mid-Wales has, since 1975, operated a daily moth trap as part of the Rothamsted Insect Survey. The trap site is at the edge of a pond in the Centre's grounds and the surroundings have changed very little during this period. The daily catches are sent to Rothamsted for identification which maintains the quality of the identification data. In the 33 years to 2007, a total of 153,444 specimens representing 389 species have been recorded. Over this period 35% of macro-moth species have declined compared to only 18% which showed increased abundance.

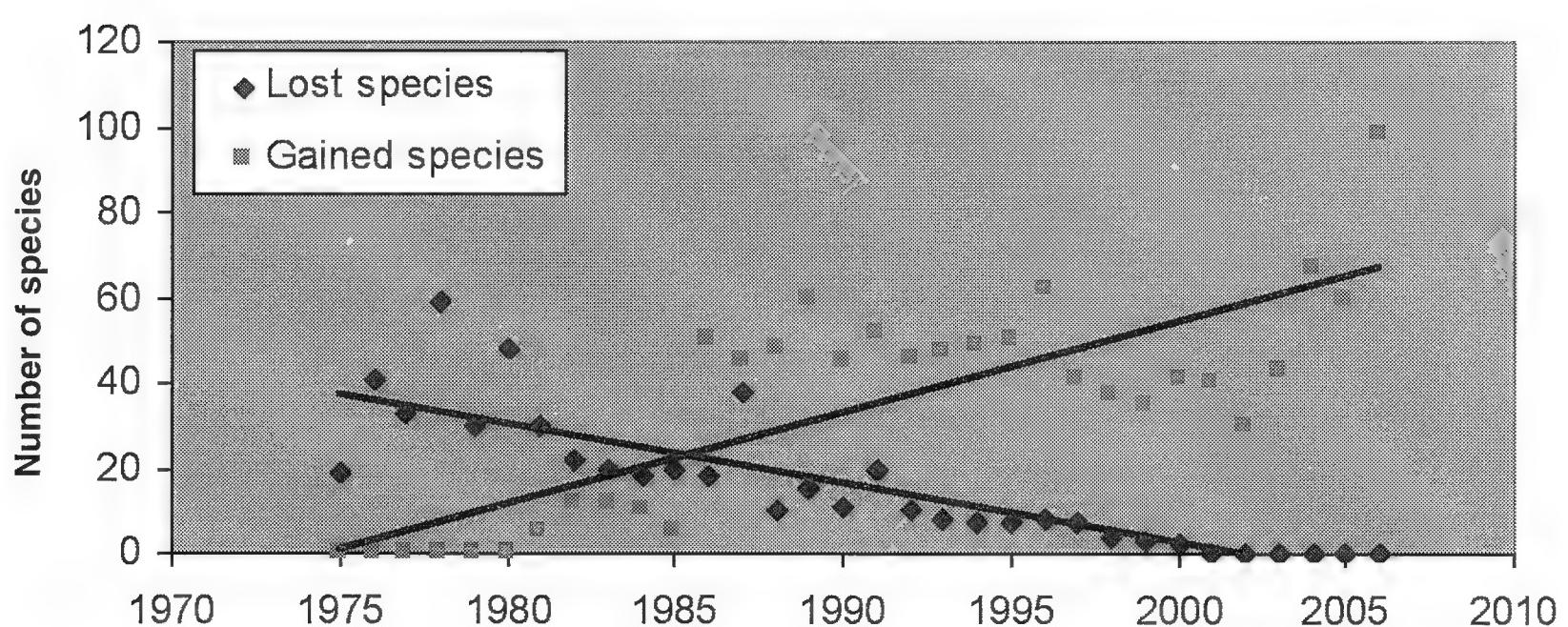
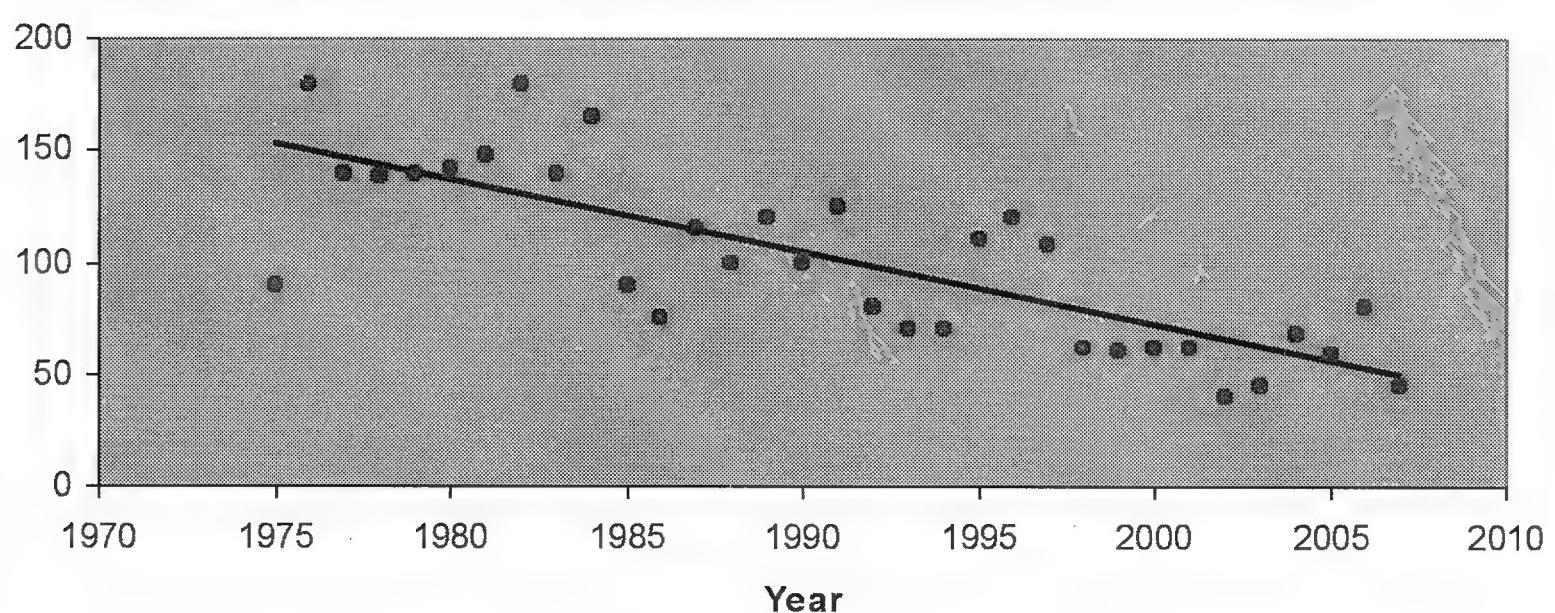
In 2008/9, Esme Barton, a project student of Peter Randerson of Cardiff University undertook an analysis of the 33 years of data. This analysis suggested that the loss of abundance was related to some major changes in the timing of the flight season, which was itself related to changes in temperature showing that moth numbers dropped as temperatures increased.

The five species with the highest rates of decline between 1975 and 2007 were *Orthosia gothica* (Hebrew Character), *O. cruda* (Small Quaker), *O. stabilis* (Common Quaker), *Hydriomena furcata* (July Highflyer) and *Epirrita dilutata* (November Moth). Conversely, the species with the highest rates of increase in numbers were three Footman (*Eilema*) species which were not recorded in the first five years of sampling and *Epirrita christyi* (Pale November Moth) which, although present in 1975, has seen a surge in numbers in the last two decades.

Using the definition of a new species to the site as one that did not occur in at least the first five years of recording and an 'extinction' as an absence of at least five years, 45 new species were recorded at Llysdinam subsequent to 1981 whilst 22 species were lost from the trapping record by 1999. The first 'extinctions' only occurred after 1986, a year which saw an influx of 20 new species (Figure 1).

The colonist species, which include eighteen *Eupithecia* and related species, tend to be already widespread in the UK, but perhaps increasing in abundance rather than a possible northward radiation of southern species due to climate change. Although our trapping site is not at particularly high altitude (200 metres) our location to the lee of the Cambrian mountains tends to be rather cold – minus 28°C on one night in 1982 and several years with only one month of the year clear of ground frost. Perhaps these species are responding to our warmer springs and moving up in altitude in response to these more favourable conditions rather than moving north.

Figure 2 shows that taken over the year, the mean abundance of individuals per week has declined significantly throughout the period. Even when the data are split into seasons, each season shows a similar significant decline even though, over the last two decades, there has been a significant increase in the late spring temperatures (March – May) which might be presumed to reflect favourably on moths and conversely, rainfall patterns, if not quantity, have changed, particularly in winter when increased rain can influence larval and egg survival.

Figure 1. Trends in abundance for gained species versus lost species.**Figure 2.** Fitted line plot of mean weekly abundance for each year.

Land use change, except perhaps the change from hay to silage making, has not been noticeable in this largely pastoral area. Sheep production has expanded as the dairy industry has declined, acid rain and agricultural chemicals appear as lesser problems than they were 30 years ago, but such interacting external parameters are difficult to quantify.

The value of long term data cannot be overemphasised and this highly significant decline in moth numbers over three decades in Mid-Wales might otherwise have gone completely unnoticed without this study. If this is happening to macro-moths what unseen declines might be occurring in other Mid-Wales invertebrate populations? The moths which come to light traps are probably indicators of more general change and may well tell us a great deal about the success or otherwise of bird and mammal populations in the wider landscape which feed upon larger insects.— ESME BARTON, FRED SLATER AND PETER RANDERSON, Cardiff University, Llysdinam Field Centre, Newbridge-on-Wye, Powys LD1 6NB (Contact Fred Slater, E-mail: slaterfm@cf.ac.uk).

The Orange Moth *Angerona prunaria* Linn. (Lep.: Geometridae) in Monks Wood, Huntingdonshire, VC31

The Rothamsted Insect Survey light-trap began operating at Monks Wood on 20 February 1974 and ran consistently until the unfortunate closure of the Centre for Ecology and Hydrology at the beginning of 2009. The trap was known as Ewingswode (site 277: O. S. grid reference TL 200797) to distinguish it from a trap previously run in the area around the laboratory buildings. Annually, it was one of our most productive sites, with a very high diversity of species and its 35 years provided a very large and invaluable long-term data set. Despite this long run, the trap did still occasionally catch specimens of particular interest.

Examination of stored samples revealed that during the period 30 June to 3 July 2006 two individuals of *Angerona prunaria* were caught in the trap. These were the first to be recorded at the site or, indeed, in Huntingdonshire since 21 June 1963 (recorded by J. A. Thompson) and to date no others have been discovered in the county. The species is well-distributed and sometimes frequent in southern and south-east England, local in south-west England and south-east Wales and very local in central England, occurring north to Shropshire and Lincolnshire (Waring, P., Townsend, M. & Lewington, R. 2003. *Field Guide to the Moths of Great Britain & Ireland*. British Wildlife Publishing). It inhabits well-established broad-leaved woodland, heathland and ancient hedgerows, where the larvae feed upon a wide variety of plants and trees including birches *Betula* spp., Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna*, Heather *Calluna vulgaris*, Broom *Cytisus scoparius* and Traveller's Joy *Clematis vitalba* (Waring, et al, *op. cit.*).

Despite seemingly suitable habitat being available, records from Huntingdonshire and surrounding counties have been few and far between. Two thirds of Huntingdonshire records have come from Monks Wood, with only seven other sites providing specimens since the first records were made by E. Crisp in July 1800 (aptly, at Monks Wood). These include Bevill's Wood (TL 2079) from where *A. prunaria* was last recorded in 1926 and Warboys Wood (TL 3081), where it was last noted in 1928. Cambridgeshire (VC 29) has recent records from only two sites – the first individual from Eversden Wood (TL 3453) was recorded on 23 June 2005; and the most recent record came from the county's largest wood, Hayley Wood (TL 2852) in 2006. However, there had been no previous trapping in these woods during the late June-July flight period, so it is not known whether this was new colonisation or not (John Dawson, pers. comm.). Bedfordshire (VC 30) has only eight records from scattered localities, the most recent being from Molivers Lane in Bromham (TL 007514) on 12 July 1983. Northamptonshire (VC 32) also has few records, with most recent ones coming from two localities in the north of the county – Castor Hanglands National Nature Reserve (TF 1201) was historically the Northamptonshire stronghold for *A. prunaria* but it has not been found there since 1988 and Spanhoe Wood (SP 9495) produced a singleton on 11 July 1990 (www.northamptonshirewildlife.co.uk).

My thanks to Nick Greatorex-Davies for his many years of hard work operating the Ewingswode light trap and to Barry Dickerson, the Huntingdonshire Moth Recorder, for alerting me to the status of these records and for further information. Thanks also to John Dawson, Andy and Melissa Banthorpe and John Ward, the Cambridgeshire, Bedfordshire and Northamptonshire Moth Recorders, respectively, for information supplied.— PHILIP J. L. GOULD, Co-ordinator of the Rothamsted Insect Survey Light-trap Network, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ (E-mail: phil.gould@bbsrc.ac.uk).

An odd variation of Shoulder-stripe *Anticlea badiata* ([D&S]) (Lep: Geometridae) in Bedfordshire

As county macro-moth recorders for Bedfordshire (VC 30) we regularly receive e-mailed photographs of moths for identification. However, one sent to us in March 2009 puzzled us somewhat. This moth was found on the wall of his parents' house in Caulcott on the edge of Marston Vale Country Park on 23 March 2009 by Martin Green. Fortunately at this time of the year there are not too many species on the wing and it was obvious that this was most likely a form of the Shoulder-stripe *Anticlea badiata*. The difference of this specimen from the normal form of the species is that the ground colour of the moth is a greyish-brown with none of the usual pale stripes across the wings and only a couple of dark cross-lines.

The photograph was passed onto others for consideration and also posted to the UK Moths e-mail discussion group. Martin Honey kindly checked the RCK collection at the Natural History Museum and commented that the best match was a short series of specimens under the name *Anticlea badiata* ab. *eckfordii* Smith, 1947. This was described in Smith (1947. *New Varieties of British Lepidoptera from Cheshire and Denbighshire, Report and Proceedings of the Cheshire Society of Natural Science, Literature and Art* 1947: 72, and pl. Fig 7) which Martin arranged to be copied and sent to us along with a photograph of the type specimen from the RCK collection.

The type specimen for this form was taken in Pulford Cheshire on 3 April 1946 by Mr Edward Eckford. Since the reference will not be available to most, the original description is repeated here: '*Fore-wings colour greyish-brown, the basal blotch is the same colour, the narrow line outside this blotch is blackish, running close to this is another slender blackish stripe. Beyond the middle, starting at the costa, is a thin blackish line which extends downwards for about a third of the wing, and running into the apex is the usual short black streak. hind-wings smoky-grey with brownish fringes. Head, thorax and body greyish-brown.*'

The difference between the Bedfordshire specimen and the Pulford description and photograph is that where Smith describes a thin blackish line beyond the middle of the wing and extending for a third in from the costa, the



Plate 37. *Anticlea badiata* ([D.&S.])
Bedfordshire, 23.iii.2009. M. Green.

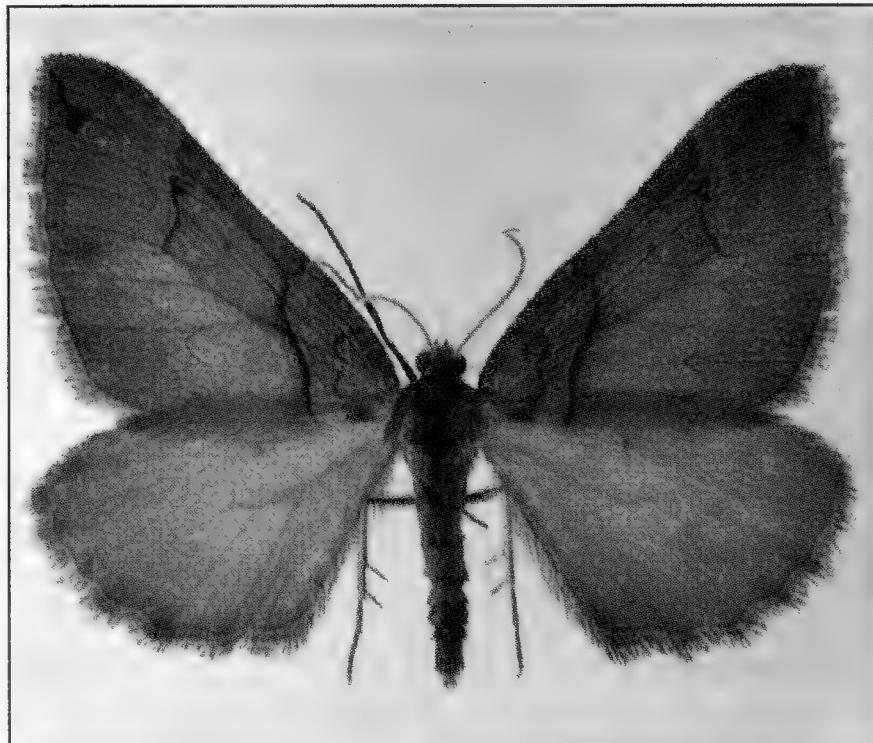


Plate 38. *Anticlea badiata* ([D.&S.]) ab.
eckfordii Smith. Pulford, Cheshire, 3.iv.1946.
Cockayne-Kettlewell coll. B.M. 1947-114.

Bedfordshire one has a thin creamy-white line just outside and adjacent to this inwards from the costa for a few millimetres. Unfortunately the Bedfordshire specimen was not retained as the finder did not realise the significance at the time. — ANDY AND MELISSA BANTHORPE, 32 Long Close, Lower Stondon, Bedfordshire, SG16 6JS.

Slender-striped Rufous *Coenocalpe lapidata* (Hb.) (Lep.: Geometridae) recorded from a UV kitchen insect zapper

Alexander (2008, *Ent. Rec.* 120: 147-149) and Littlewood (*antea*: 190-191) both described significant insect records attained from UV insect electrocutor devices installed in kitchens on hygiene or health grounds. A wet weekend stay at the hostel at Inchnadamph Lodge, West Sutherland (VC 108) provided an opportunity for another rifle through the contents of such a device. Thirteen Lepidoptera specimens comprising eight species were picked out from the tray on 27 September 2009. These included, most significantly, a single Slender-striped Rufous *Coenocalpe lapidata*. Although within the general range for this northern species, this specimen is noteworthy given a paucity of recent records.

A further useful by-product of inspecting this device was that it contained five male “ear” moths, that could be identified to species by genitalia examination without the need for killing specimens specifically for this purpose; these comprised three Large Ears *Amphipoea lucens* Freyer and two Crinan Ears *A. crinanensis* Burrows.

Clearly these devices can produce significant records. Observers who take the plunge and delve through the sea of midges may be rewarded with further prizes to compensate for the bemused look from fellow hostellers. — NICK A. LITTLEWOOD, Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH. (Email: n.littlewood@macaulay.ac.uk).

Hazards of butterfly collecting. The case of the Nigerian *Euriphene* – 1967-2009

In mid-December 2008 I received an unexpected e-mail from Tomasz Pyrcz in Poland. He suggested that he had a butterfly new to science from western Nigeria, where I had made my first tentative contributions to African butterflies back in 1967 and 1969. Would I help him pin down this species? We had never been in touch before. I had no idea that he had collected extensively in my old Nigerian haunts while posted to Lagos as a Polish diplomat during two tours some years apart. I did know him from a small series of interesting papers on the tiny islands of Principe and Sao Tome, situated way out in the “Armpit of Africa”, far removed from the much larger island of Bioko [a.k.a. Fernando Po]. These islands have a relatively small butterfly fauna that is of great interest since many of those present have evolved into endemic species, giving them the highest proportion of endemic species anywhere in Africa. My own favourite is perhaps *Neptis larseni* Wojtusiak & Pyrcz, 1997, though my only contribution had been to send a genitalia slide that I had mounted in the marvelous collection at the African Butterfly Research Institute (ABRI) in Nairobi during my studies of the genus. So, yes, by all means ... let me have a look.

I hope this account will help to outline the amazing twists and turns that are often involved in trying to track down and describe a species new to science and the degree of cooperation that is necessary to be sure. On a very few occasions I have stood in the field with a species in the hand convinced that it was new. More often, it is a bumpy ride before a conclusion is finally reached, though it may then leave one wondering how on earth something ‘that obvious’ could have been overlooked for so long!

The species in question belonged in the genus *Euriphene*, of which some 60 species have been described. They are members of the nymphalid tribe Adoliadini in the subfamily Limenitidinae. This tribe is limited to the rainforest zones of Africa (the genera *Euphaedra*, *Bebearia*, *Euriphene*, and a few genera with just one or two species) and of Asia (chiefly *Euthalia*, *Tanaecia*, and *Lexias*). They are the forest-floor butterflies *par excellence*: most are limited to rainforest in reasonable condition and are rarely seen flying more than a metre above the ground (one or two in either continent have managed to evolve greater ecological flexibility than their hundreds of cousins). They have limited capacity to withstand temperature fluctuations, needing a stable habitat with temperatures of 25-32°C. Butterflies of open habitats, like savannahs, need to survive a temperature range from near zero to more than 45 degrees. DNA studies make it almost certain that all the African species are descended from a common ancestor and that the Asian species are descended from another. I would very much like to meet the joint ancestor of both the African and the Asian species, but that is long since extinct.

By the time Tomasz sent details and photographs I was in Denmark for Christmas. He suggested that: 1) *Euriphene tadema* in western Nigeria was different from the true *E. tadema* Hewitson, 1866 in eastern Nigeria and

Cameroun, and 2) that the two females were completely different. Now, there are actually three very similar *Euriphene* in western Nigeria that have almost the same, very pretty, shining blue upper surfaces, but their undersides differ. *E. tadema* is readily identified by having very uniform light, straw-coloured undersides, where the two others are brown with some purplish and violet dusting. Identifying *E. tadema* even in the field was a piece of cake – never the least doubt, not worth even catching. I hurried to the Natural History Museum at Copenhagen University (ZMUC) to look at my own butterflies from the 1960s that I had deposited there when leaving Denmark for good. And sure enough – my ten *E. tadema* males from western Nigeria were different from their long series in the collection from Cameroun, and similar to those of Tomasz' series. Two or three had been included among material from Cameroun and I could easily pick them out: 'This one must be from western Nigeria'!

I also vaguely remembered that we had difficulties in identifying female *E. tadema* ... they seemed to intergrade with the females of the two other blue *Euriphene* and not have a truly straw-coloured underside. Here Tomasz suggested that the females of this species were actually what had always been accepted as representing that of *Euriphene coerulea* Boisduval, 1847, otherwise known only from Ghana west to Sierra Leone. This female is completely different from that of *E. tadema* and the two others. In my 2005 monograph of *The Butterflies of West Africa* I had accepted *E. coerulea* from Nigeria. The conventional wisdom had been aided by the presence of a male from 'Nigeria, Panguma', though this locality is probably in Sierra Leone, where *E. coerulea* is common. No other Nigerian male was known.

Inspection of the eight or so '*coerulea*' females available from western Nigeria showed that their undersides were close to the males in pattern and that they differed, rather subtly, from the true female of *E. coerulea*. My own two females in ZMUC were a perfect match for the four photos that Tomasz had sent and to some females I had given to ABRI many years ago.

Back in London at the beginning of January I had an in-depth rummage in the collections of the Natural History Museum (NHM) with the help of the butterfly curator, Blanca Huertas. A rummage at the NHM is no picnic. There are boxes and boxes of old material and there are numerous small accessions that were donated by various collectors but not yet integrated in the main collection. However, very little material is from western Nigeria. Finally, in a box with many true *E. tadema* from eastern Nigeria, there was a dozen of the new '*E. tadema*'. I immediately took them to be from western Nigeria, and they were indeed from Warri in the Niger Delta. A single female had the same label as the males. One male and the female carried a yellow label saying 'tadema ssp. nov.?'. Someone had long ago spotted our issue, including the identity of the female, but not pursued it. These two specimens also had a label placed by the French lepidopterist, Georges Bernardi saying 'tadema ssp. nov.' for the male, but 'felicia (*coerulea*)' for the female, thus reinforcing conventional wisdom as far as the female was concerned.

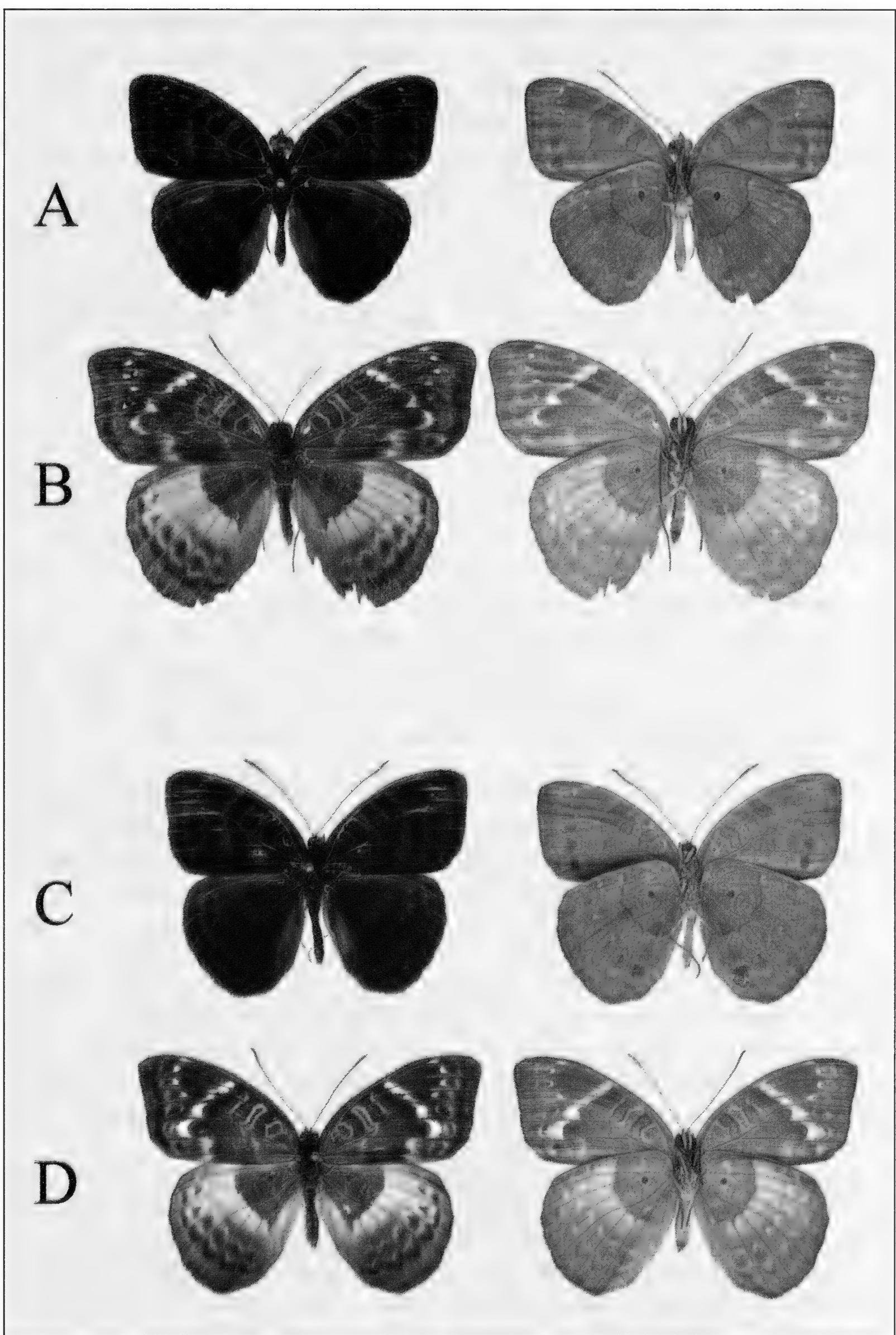


Plate 39. The picture from Tomasz Pyrcz with the new species that started the ball rolling. Two pairs are shown (A & C are males). Note the similarity of the basal markings of the hindwing, which link the two sexes.

All material of the new *E. 'tadema'* (at least 45 males and 10 females) is from western Nigeria or the Niger Delta. We have checked hundreds of the true *E. tadema* from eastern Nigeria (chiefly the Oban Hills) and western Cameroun. None was found. The new species is not unique in being limited to western Nigeria and the Niger Delta. There is an endemic monkey and several butterflies, including the very distinctive *Euriphene kiki* Bernardi & Larsen, 1980.

The main factors that had obscured the issue was a) the conventional wisdom that *E. coerulea* occurred in Nigeria, b) the fact that *E. tadema* was so easily recognizable by its underside, c) that rather limited collecting had taken place in western Nigeria and d) that collectors, such as myself, never had access to western and eastern material at the same time. It was only when Tomasz had finally set all his Nigerian material in the Jagiellonian University in Krakow that the penny dropped.

We plan to name the species *Euriphene epe* after one of the few remaining forest patches in western Nigeria. Nearly all forest has gone from the area and what remains is a prime conservation priority. Fortunately the new species is found in Okomu National Park, where it should be reasonably secure since the Park is being developed for ecotourism. I caught the new species there myself about ten years ago. When you read this, *Euriphene epe* will, hopefully, just have been published in the South African journal *Metamorphosis*. — TORBEN B. LARSEN, Jacobys alle 2, 1806 Frederiksberg C, Denmark (E-mail: torbenlarsen@btinternet.com).

Return migration of the Painted Lady *Vanessa cardui* (L.) (Lep.: Nymphalidae) in Britain

The mass immigrations of the Painted Lady provide some of the most amazing butterfly spectacles witnessed in Britain and Ireland. Interest reaches well beyond the community of butterfly recorders and other entomologists, capturing the imagination of the public and the national media. In spite of our familiarity with this insect in its years of abundance, there has always been a mystery about its migration. There are countless observations, over many decades, of the arrival of Painted Lady butterflies to our shores, but very little evidence of a return migration at the end of the season. In his classic book, Professor Jeremy Thomas states that 'it is unknown whether British adults ever return south in autumn' (Thomas, J. A. and Lewington, R., 1991 *The butterflies of Britain and Ireland*. Dorling Kindersley, London).

In principle, there is no reason why migration need involve a return journey and one-way migration of butterflies such as the Large White *Pieris brassicae* and Small White *P. rapae* can be favoured by natural selection (Baker, R. R., 1968. *Philosophical Transactions of the Royal Society of London B* 253: 309-341). However, these species maintain year-round resident populations in Britain and Ireland. In contrast, it is long-established that Painted Ladies cannot normally survive winters here, although there is one confirmed case of this occurring (Wacher, J., 1998. *Atropos* 5: 19-20). So there would appear to be good reason for individuals to move southwards in the autumn.

It also seems likely that the species cannot normally survive summer climate in the south of its range, in North Africa and the far south of Europe. Thus, for the breeding cycle to continue, there must surely be a northward movement of Painted Ladies in the spring and a return movement in the autumn. Furthermore, the closely-related Red Admiral *Vanessa atalanta* is commonly observed migrating southwards from Britain in the autumn, as well as northwards into Britain in the spring and summer.

The puzzle of our autumn Painted Ladies has baffled scientists and natural historians for decades. It has been suggested that the butterflies might make migratory flights at high-altitude, out of eye-sight of observers on the ground (Stefanescu *et al.* 2007 *Journal of Animal Ecology* 76: 888-898). Although this is entirely possible and awaits further study, it still seems very strange that Painted Ladies are commonly observed undertaking northerly migrations at low-altitude but not in the opposite direction. In addition, Red Admirals clearly undertake low-altitude migration in both directions.

During October 2009, when Painted Lady butterflies were still being widely reported across Britain and Ireland, I received three very notable records (a fourth was also received but remains unconfirmed at the time of writing). In each case, Painted Ladies had been observed flying directly out to sea from the south coast of England. Two were submitted to Butterfly Conservation's online survey (www.butterfly-conservation.org/migrantwatch) set up specifically to track the migration of the Painted Lady (and Humming-bird Hawk-moth *Macroglossum stellatarum*) and the third to the County Recorder for Cornwall. Each of these records is highly significant in light of the enduring Painted Lady mystery, but taken together, and occurring within a single week, they provide powerful evidence that the species does indeed undertake a return migration southwards in the autumn. The Painted Lady records, in chronological order, are as follows:

14 October 2009: One flying south-eastwards out to sea (O. S. grid reference: SW 365217) near Porthgwarra, close to Land's End, Cornwall just before 11.00 hrs. (Graham Beevor).

17 October 2009: Three flying out to sea together at Kelly's Cove (SX 909499) near Kingswear in south Devon at 12.55 hours. (John Fish).

17 October 2009: One flying strongly south-eastwards over the cliff edge (TV 566954) near Beachy Head, East Sussex and out to sea at approximately 13.00 hours. (Derek Barker).

There are several aspects of these records that lend strong support to the idea of return migration. First, in each case the insects were observed to fly in a direct manner straight out to sea in a southerly direction until out of the observer's view. This behaviour is clearly consistent with migration to continental Europe, although it is not absolute proof as there are cases of migrant species heading out to sea only to re-orientate and return to the coast perhaps in a different part of Britain.

Also consistent with return migration are the facts that all three sightings took place on the south coast of England and at an appropriate time of year.

Furthermore, the occurrence of three sightings, involving five individual butterflies, in the course of a single week, suggests that many Painted Ladies might have been departing our coasts at this time, as does the fact that the observations reported here were widely-spaced along the coast (265 miles apart as the crow, or butterfly, flies).

Finally, all of the observations were from headlands. Such coastal features play an important part in migration, particularly of birds, funnelling and concentrating individuals from large areas of countryside prior to emigration.

There is much still to learn about Painted Lady migration from Britain. These sightings show, most importantly, that it does occur. We do not know, though, whether all Painted Ladies undertake this southerly migration, nor where those that do migrate end their journeys and if they are able then to continue this species' ceaseless breeding cycle. These important details remain for future study, perhaps utilizing modern technology such as miniature radio transmitters (Wikelski *et al.*, 2006. *Biology Letters* 2: 325-329), but the enduring mystery of whether UK Painted Ladies return south appears to have been solved. I would, of course, be delighted to hear of any other similar observations from Britain and Ireland.

I am very grateful to the recorders for their permission to report these sightings and for their help in providing details. I am also grateful to John Worth, Butterfly Recorder for Cornwall, who kindly alerted me to the first of the sightings, and to my colleagues Tom Brereton and Martin Warren for valuable discussion and suggestions.— RICHARD FOX, Butterfly Conservation, Manor Yard, East Lulworth, Dorset BH20 5QP (E-mail: rfox@butterfly-conservation.org).

Syncopacma polychromella (Rebel) (Lep: Gelechiidae) new to Ireland

On the night of 30 May 2009 a male *Syncopacma polychromella* (Rebel, 1902) was netted at a garden MV trap at Tramore, Co. Waterford (Irish grid reference S 578014) on the south-east coast of Ireland. An adventive and primary immigrant species, the Irish specimen was taken at a time that saw south-easterly winds along the Waterford coast bring exceptional numbers and diversity of migrant species to Tramore Bay for late May and early June. Mapped by Fauna Europaea (see <http://www.faunaeur.org>) for Austria, Canary Is., Crete, Croatia, Greece, Italy, Macedonia, Madeira, Malta, Portugal and Spain, *S. polychromella* is also known from Africa, the Middle East and India.

The moth was identified using (Bland, K.P. Heckford, R.J. and Langmaid, J.R. 2002 *Gelechiidae: Anacampsinae* In Emmet, A.M. & Langmaid, J.R (eds.), *The Moths and Butterflies of Great Britain and Ireland* 4(2): 204-220. Harley Books, Colchester). The specimen has been lodged with the National Museum of Ireland, Natural History (Reg. No. NMINH 2009. 54).

I would like to thank Ken Bond who kindly confirmed the identification — TONY BRYANT, Priest's Road, Tramore, Co. Waterford, Ireland.

Recent records of *Proterops nigripennis* Wesmael (Hym.: Braconidae) in Kent

Proterops nigripennis is ‘an uncommon solitary koinobiont endoparasitoid of argid sawflies, but its developmental biology is not known in greater detail’ (Shaw, M.R. & Huddleston, T., 1991. Classification and biology of braconid wasps. *Handbooks for the identification of British Insects* 7(11): 1-126). Thomas Marshall (1889. A monograph of British Braconidae. Part III. *Transactions of the Entomological Society of London* 1889: 149-210) stated ‘Very rare in this country; a parasite of *Hylotoma enodis*, L. ...Curtis records a male captured in Birch Wood, Kent, and a female taken by Kirby, now in the Stephensian collection; Cameron has obtained more than one in Scotland, and the male I possess is due to his liberality’. It is one of the few braconids to be included on the RECORDER database (version 3.3.of 1 July 1997) and here it was accorded the status of Notable/Nb (estimated to occur within the range of 31 to 100 modern 10 km map squares). All that was said, however, is that it is ‘A small parasitic wasp’. The species data were updated on 16 May 1989. While no attempt has been made to ascertain the national data my records, of single specimens, may be of interest.

19 July 1997, Dering Wood, near Pluckley, TQ 902445. General sweeping in broad-leaved woodland on Weald Clay.

12 June 2004, Farningham Wood, TQ 54506785. On flowers of Hogweed *Heracleum sphondylium* along trackside clearing in broad-leaved woodland on Thanet Sand.

15 August 2008, Covert Wood, near Barham, TR 1848. On flowers of Devil’s-bit Scabious *Succisa pratensis* in Forestry Commission managed broad-leaved and conifer woodland on clay-with-flints.

17 August 2008, Hollingbourne Down, TQ 852558. On flowers of Wild Parsnip *Pastinaca sativa* in south-facing, cattle-grazed chalk grassland.

Marshall’s statement that the species is associated with *Hylotoma* (= *Arge*) *enodis* L. must be treated with caution as two species have entered the literature under that name. There is the true *Arge enodis* (Linnaeus, 1767), associated with *Salix* spp., apparently known in Britain from Coombe Wood, Surrey by J.F. Stephens (Benson, R.B., 1951. Hymenoptera, Symphyta. Section (a). *Handbooks for the identification of British Insects VI (2a)*: 1-49) and the more widespread *Arge nigripes* (Retzius, 1783), associated with *Rosa* spp.

The mimicry between adults of *Proterops nigripennis* and those of the orange-abdomened and dark-winged sawfly *Arge pagana* (Panzer) should not be overlooked and it may be pertinent to note that the latter species was also recorded from Farningham Wood on 12 June 2004.— LAURENCE CLEMONS 14 St. John’s Avenue, Sittingbourne, Kent ME10 4NE.

MICROLEPIDOPTERA REVIEW OF 2008

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Abstract

Noteworthy records of microlepidoptera collected during 2008 are collated, including four species new to the British Isles and numerous other new vice-county records.

Keywords: Britain, Lepidoptera, microlepidoptera, records

Introduction

2008 was a year of generally disappointing weather for microlepidopterists, continuing the rather cool, damp conditions of 2007, in contrast to the warm dry weather in 2006. However, analysis of the more detailed climate data shows some significant variations, with January and February being warmer and sunnier than usual, May also milder, but October and, to a greater extent, December being much colder than the long-term average. The main summer months were much wetter than normal, with less sunshine, especially in August. In addition, there was also much geographic variation. Compared with the long-term trends, January to March were warmer and drier in the south, whereas the north was more normal; the spring was both warmer and wetter in the south, with normal weather further north; whereas the summer was warmer than usual in the north and drier in the extreme south-east. Autumn was generally similar to the normal climatatic trend all over the country, whereas winter was especially cold in the south and dry in the west and north. The poor summer weather made field work disappointing, but despite this there are many new records to report.

This year we have slightly relaxed our policy of only listing records from the year in question, because some new county recorders have joined the review and, to accommodate their records, we have allowed the inclusion of some of their earlier data. However, our normal policy will be continued in future. The maps on which the identification of new records are based have been photocopied for safety and three copies now exist, but they are annotated by hand and so cannot be easily copied or consulted. A number of county recorders have very reasonably asked for access to maps of records from their areas but this is very time-consuming, well beyond what the authors can manage for everyone and so is difficult. It is just not possible to answer all requests for information on what occurs where, and so consideration is being given to digitising the maps, but there are difficult technical problems with this and so far it has not been achieved.

The names that are used in the review are those found in the checklist of Bradley, J. D. (2000) (*Checklist of Lepidoptera recorded from the British Isles*. 2nd Edition (revised) Published by Bradley D. J. & Bradley, M. J., Fordingbridge, Hants), with the only modifications being those published by Langmaid, J. R. & Agassiz, D. J. L. (2005) (Changes in the names of British microlepidoptera).

Entomologist's Record and Journal of Variation 117: 143-147). We have not adopted other changes proposed in Continental literature, preferring the clarity offered by using one British checklist, believing that this will allow future enquirers to identify the species in question with ease.

The recent experience of the National Moth Recording Scheme has highlighted the difficulty of ensuring accurate identifications in distribution schemes. Many doubtful records of macromoths have had to be noticed, checked and often then rejected by vice-county recorders, causing a great deal of extra work and anxiety, and unfortunately many such records are not supported by voucher specimens, or even by good quality photographs. The same anxiety applies to some extent to this review, and although some county recorders are experienced microlepidopterists, some are less so and there may be no systematic attempt to check the identity of all the records. Consequently, it might be claimed that some records are open to doubt. However, various factors act to reduce this potential difficulty. First of all, whenever possible those records that are exceptionally interesting, and/or are a long way from the normal range, are questioned by the authors. Secondly, the inherent difficulty of identifying microlepidoptera actually leads to more initial checking and reference to experienced recorders. In addition, it is still much more normal to keep voucher specimens of micromoths. Photographs are frequently inadequate for identification and so microlepidopterists are used to keeping specimens and there is less reluctance to kill individual micromoths, compared to macromoths. In practice most of the records are probably based on specimens that have been seen by several microlepidopterists, or are still available for checking, but this may not always be so and consequently some of the records in this and previous reviews might be regarded cautiously as unconfirmed. Reference to the authorities for each record should be made if it is desired to check them further.

Species new to the British Isles in 2008 are *Prays oleae* Bernard, which was found in a moth trap in the Isle of Grain, Kent, and *Aethes bilbaensis* (Rössler), also in a moth trap but in this case in Devon. The former, whose larvae feed on olive trees, may either be a stray or perhaps was imported on horticultural stocks of olives; whereas the latter may be an overlooked resident. In addition, *Diaphania perspectalis* Walker, which is spreading its range on the Continent, where it can be a pest on box, was found in two southern English vice-counties; and *Stenoptilia inopinata* Bigot and Picard has recently been separated from other *Stenoptilia* species. It can only be easily recognised following dissection of the genitalia and a specimen so determined was originally found in 1990 at Plympton, in Devon, and is new to the British Isles. Presumably other specimens of this species may be present undetected in collections.

Those species new to each of the component countries are set out in bold type and often refer to species, such as *Phylloconistis saligna* (Zeller) new to Wales, which are clearly spreading their range; or are known migrants, such as *Hellula undalis* (Fabricius) new to Ireland; or are overlooked residents, such as *Epermenia aequidentellus* (Hofmann), new to both Scotland and Ireland. Other interesting records include *Trifurcula squamatella* Stainton, re-discovered after presumably

having been overlooked for 150 years in Suffolk; and *Opogona omoscopa* (Meyrick) which is already known from the Channel Islands but was found in Yorkshire. *Ethmia pyrausta* (Pallas) has been rediscovered, again after more than 100 years, much closer to its original location in East Ross, after the extraordinary discovery of specimens on the Cairngorms in the 1990s, and it now seems likely that it may be an inconspicuous species spread over a wide area of the eastern Highlands. The first confirmed record of the larvae and foodplant in Britain of *Gynnidiomorpha permixtana* ([Denis & Schiffermüller]) is reported from Devon, and *Pammene ignorata* Kuznetsov, for which there are very few previous records indeed, has been found in both Devon and Cheshire. One of the new species to Wales, namely *Grapholita lobarezewskii* (Nowicki) is now spreading but seems to be using apple as a foodplant, rather than plum, as previously reported.

We would now welcome many more records for 2009, please, asking that they be in our standard format and with a national grid reference, so as to save editing time, and for preference sent as **WORD files** to JRL and please, please not as **spreadsheets**. We are grateful to our many recorders, who make this exercise so interesting, and especially to Ian Thirlwell for invaluable help with the time-consuming task of checking and collating new records.

The following entomologists have contributed records for the 2008 review, indicated in the text by their initials: D.J.L. Agassiz, M.V. Albertini, D.J. Allen, H.E. Beaumont, S.D. Beavan, P. Bergdahl, D.T. Biggs, K.P. Bland, K.G.M. Bond, T. Bryant, J.H. Clarke, P.J. Clarke, V.F. Clarke, J. Clifton, G.A. Collins, P.D.M. Costen, D.W.W. Davidson, A. M. Davis, B. Dickerson, J.R. Duffie, B. Elliott, R. Elliott, C.H. Fletcher, R.W. Foreman, T.H. Freed, R.G. Gaunt, R.W. Goff, B. Goodey, A.N. Graham, J.E. Graham, N. Gregory, M.W. Harper, M.C. Harvey, R.J. Heckford, J.B. Higgott, S.H. Hind, D. Hipperson, M.R. Honey, S.A. Knill-Jones, J. Knowler, J.R. Langmaid, A.D. Lewis, N.R. Lowe, A.J. Mackay, D.V. Manning, E. O'Donnell, R.M. Palmer, S.M. Palmer, M.S. Parsons, C.W. Plant, J. Porter, C.R. Pratt, A.W. Prichard, I.S. Scott, A.N.B. Simpson, I.R. Sims, D.J. Slade, C. Smith, E.G. Smith, M.H. Smith, P.H. Sterling, N.J. Stone, T.J. Tams, L.A.C. Truscott, M. Tunmore, M.J. Wall, A.J. Wheeldon, J.R. Wheeler, P.R. Williams, M.R. Young. Other recorders' names are set out in full.

New vice-county records are shown with the VC number both underlined and in **bold** type. Journals are abbreviated as follows: *Ent. Rec.* for *Entomologist's Record and Journal of Variation*; *Ent. Gaz.* for *Entomologist's Gazette*; *BJENH* for *British Journal of Entomology and Natural History*; and *Atropos* is named in full. RIS indicates the Rothamsted Insect Survey and VCH refers to the *Victoria County History*.

SYSTEMATIC LIST

MICROPTERIGIDAE

- 4 *Micropterix aruncella* (Scop.) — Cwm Byddog RWT Reserve SO215448 (**43**) f.
seppella Fabr. 19.v.2007 — PJC & VFC
- 5 *M. calthella* (Linn.) — Mornington O1575 (**H22**) 3.vi.2008 — EO'D

ERIOCRAIDIAE

- 8 *Eriocrania unimaculella* (Zett.) — Spring Wood, Broadholme SK8973 (**53**) tenanted mines on *Betula pendula* 11.v.2008 — M. Gray *per CS*
- 9 *E. sparrmannella* (Bosc) — Lake Vyrnwy, Nadroedd SH958255 (**47**) tenanted mine on *Betula* 27.viii.2007 — ANG & JEG *per PRW*
- 10 *E. salopiella* (Staint.) — Edge Common SO8409 (**33**) 3.iv.2008 — G.H.J. Meredith *per RGG*; Coed Cefn SO2218 (**42**) tenanted mines on *Betula* sp. 23.v.2008 — NRL & JRL; Spring Wood, Broadholme SK8973 (**53**) tenanted mines on *Betula pendula* 9.v.2008 — M. Gray *per CS*; College Wood, Bardney TF1275 (**54**) tenanted mines on *Betula pendula* 15.v.2008 — CS

NEPTICULIDAE

- 19 *Bohemannia quadrimaculella* (Boh.) — Stanway Park SP0632 (**33**) 24.vii.2008 — R. Homan *per RGG*; The Delves SO6215 (**34**) 26.vii.2008 — G.H.J. Meredith *per RGG*; Whitacre Heath, Ladywalk NR SP21409202 (**38**) 2.viii.2008, genitalia det. — M. Kennard *per NJS*; Tynewydd, nr. Llanfyllin SJ157210 (**47**) 27.vii.2008 — M.D. Haigh *per PRW*
- 20 *Ectoedemia decentella* (H.-S.) — Glasgow Botanics NS569676 (**77**) 5.vii.2008 — NG, **New to Scotland**
- 30 *E. arcuatella* (H.-S.) — Pitchcombe Wood SO8408 (**33**) tenanted mines on *Fragaria* sp. 24.x.2008 — G.H.J. Meredith *per RGG*
- 31 *E. rubivora* (Wocke) — Lineover Wood SO9818 (**33**) tenanted mines on *Rubus* sp. 16.x.2008 — G.H.J. Meredith *per RGG*
- 41 *E. atrifrontella* (Staint.) — Bushy Park TQ166692 (21) 22.viii.2006, first VC record with data — THF; Ipswich TM208432 (**25**) 28.viii.2008, genitalia det. JC — N. Sherman *per JC*
- 42 *E. septembrella* (Staint.) — Osborne Estate SZ5294 (10) tenanted mines on *Hypericum hircinum* 12.x.2008, previously unrecorded foodplant — DTB, BE & JRL
- 45 *Trifurcula subnitidella* (Dup.) — Braunton Burrows (**4**) 26.vii.2008 one female, genitalia det. — SDB & RJH
- 46a *T. squamatella* Staint. — Rushmere St Andrew TM209438 (**25**) 4.viii.2008, two at MV light, genitalia det. — JBH; Martlesham TM237446 (25) 28.viii.2008, genitalia det. JC — S. Goddard *per JC*, first British records for over 150 years, *Ent. Rec.* 121:197-198
- 55 *Stigmella aeneofasciella* (H.-S.) — Monks Dale SK1374 (**57**) tenanted mines on *Agrimonia eupatoria* 14.ix.2008 — SHH
- 57 *S. filipendulae* (Wocke) — Banstead Downs TQ2561 (**17**) tenanted mines on *Filipendula vulgaris* 10.viii.2008 — GAC & JP
- 59 *S. poterii* (Staint.) — Berwyn SSSI SJ074340 (**47**) tenanted and vacated mines on *Rubus chamaemorus* 8.viii.2005 — ANG *per PRW*
- 70 *S. obliquella* (Hein.) — Glasbury Cutting BWT Reserve SO183393 (**43**) vacated mines on *Salix* sp. 23.x.2005 — NRL
- 72 *S. myrtillella* (Staint.) — The Park, Tidenham Chase ST5599 (**34**) tenanted mine on *Vaccinium myrtillus* 13.x.2008 — G.H.J. Meredith *per RGG*
- 78 *S. incognitella* (H.-S.) — Brandon TL7885 (**26**) mine on *Malus domestica* 11.x.2008 — AWP; Broomfield College, Morley SK3840 (**57**) vacated mines on *Malus sylvestris* cultivar 'Evereste' 8.xi.2008 — SHH

- 85 *S. suberivora* (Staint.) — Stratford-upon-Avon SP19785479 (38) vacated mine on *Quercus ilex* 1.ii.2008 — M. Kennard *per* NJS; Penmyarth SO187201 (42) vacated mines on *Quercus ilex* 27.iv.2008 — JRL
- 86 *S. roborella* (Johan.) — Hornsey (21) 5.viii.2007, genitalia det. R. Terry — M. Ashby *per* CWP; Minwear Wood SN0513 (45) larval mine 10.x.2008 — RE
- 87 *S. svenssoni* (Johan.) — Osborne Estate, SZ5194 (10) vacated mines on *Quercus robur* 12.x.2008 — DTB, BE & JRL
- 97 *S. malella* (Staint.) — St Cyrus NNR NO7463 (91) vacated mines on *Malus* x.2008, det. MRY — B. Stewart *per* MRY; Pleinmont, Guernsey WV245760 (113) tenanted and vacated mines on *Malus* 15.vi.2008 — PHS *per* PDMC
- 102 *S. aceris* (Frey) — Dinton Pastures CP SU782719 (22) vacated mines on *Acer platanoides* and *A. campestre* 11.x.2008 — M. Calway & R.D. Edmunds *per* MCH
- 107 *S. regiella* (H. -S.) — Glasbury Cutting BWT Reserve SO183393 (43) vacated mine on *Crataegus* sp. 10.vii.2006 — PJC & VFC
- 109 *S. prunetorum* (Staint.) — Llanstephan SO116419 (43) tenanted mines on *Prunus spinosa*, 8.x.2008, det JRL & NRL — PJC & VFC
- 113 *S. sakhalinella* Puplesis — Braunton Burrows (4) one tenanted mine on *Betula pendula* 17.x.2008 — SDB & RJH; Rowney Warren TL1240 (30) vacated mine on *Betula pendula* 13.vii.2008 — DVM; Kettlethorpe SK8475 (53) vacated mine on *Betula* 24.vi.2008 — M. Gray *per* CS

INCURVARIIDAE

- 129 *Incurvaria pectinea* (Haw.) — Littleworth Wood SP0833 (33) 10.v.2008 — J.S. Brock *per* RGG; Lake Vyrnwy, Eunant, SH951228 (47) vacated mine on *Betula* 30.ix.2007, ANG & JEG *per* PRW
- 132 *I. praelatella* ([D. & S.]) — Trudernish Point, Islay NR4652 (102) 5.vi.2008 — KPB

PRODOXIDAE

- 135 *Lampronia luzella* (Hübn.) — Bishop Middleham Quarry NZ333322 (66) 11.vi.2008, first county record since 19th C. — AJW & T. Barker

ADELIDAE

- 142 *Nematopogon pilella* ([D. & S.]) — Berwyn SSSI SH956283 (47) 29.v.2005 — ANG; Loch Ba NN309498 (98) 2.vi.2008 — KGMB
- 145 *Nemophora minimella* ([D. & S.]) — Hollow Moor (4) 3.ix.2006 — RJH *et al.*
- 150 *Adela reaumurella* (Linn.) — Donview, near Monymusk NJ6719 (92) vi.2008 — R. Daly *per* MRY
- 152 *A. rufimitrella* (Scop.) — Mulindry Bridge, Islay NR3659 (102) 4.vi.2008 — KPB

HELIOZELIDAE

- 157 *Heliozela hammoniella* (Sorh.) — Siccaridge Wood SO9303 (33) 8.vii.2008 — genitalia det. G.H.J. Meredith *per* RGG
- 158 *Antispila metallella* (D. & S.) — Glasbury on Wye SO181391 (43) 12.v.2008 — PJC & VFC

PSYCHIDAE

- 180 *Diplodoma laichartingella* (Goeze) — Auchmithie NO6844 (90) imago 21.vi.2008 — KPB

- 181 *Taleporia tubulosa* (Retz.) — Tidcombe Fen (4) 18.v.2005 — B.P. Henwood *per* RJH
- 185 *Luffia ferchaultella* (Steph.) — Doddington Wood SK9169 (53) case 22.iv.2008 — M. Gray *per* CS; Owlet Plantation, Blyton SK8295 (54) case 16.iv.2008 — M. Gray *per* CS

TINEIDAE

- 199 *Psychoides verhuella* Bru. — Glasbury Cutting BWT Reserve SO183394 (43) larvae mining *Phyllitis scolopendrium* 25.iv.2008 — PJC & VFC; Dalton SD5109 (59) larvae on *Phyllitis scolopendrium* 26.ii.2008, moths bred — C. Derbyshire *per* SMP
- 200 *P. filicivora* (Meyr.) — Henfords Marsh nr Warminster ST8743 (8) 19.x.2008 — EGS & MHS; Stratford-upon-Avon SP19985451 (38) 20.v.2008 — M. Kennard *per* NJS
- 203 *Infurcitinea argentimaculella* (Staint.) — Dale SM8105 (45) larval tubes in *Lepraria* sp. 10.vii.2007 — DJS *per* RE
- 212 *Haplotinea insectella* (Fabr.) — Marshford Farm SS538016 (4) 12.vii.2007 one found flying near a pheasant feeder and probably introduced with feed, origin unknown, genitalia det. RJH — R. Wolton *per* RJH
- 217 *Nemapogon wolffiella* Karsh. & Niel. — Glasbury on Wye SO181391 (43) 21.v.2008, genitalia det. — PJC & VFC
- 218 *N. variatella* (Clem.) — Hill & Holes Wood TL959916 (28) 12.vii.2008, genitalia det. DH — P. Heath *per* DH
- 219 *N. ruricolella* (Staint.) — Kenwick Park, Louth TF3484 (54) 1.vii.2008, genitalia det. — R Labbet *per* CS
- 220 *N. clematella* (Fabr.) — Commins Coch SH845028 (47) 5.viii.2007 — PRW
- 228 *Monopis weaverella* (Scott) — Commins Coch SH845028 (47) 10.viii.2006 — PRW
- 231 *M. imella* (Hübn.) — Sunderland Point (60) 6.viii.2008, det. SMP, first published VC record — J. Girdley *per* SMP
- 237 *Niditinea fuscella* (Linn.) — Glasbury on Wye SO181391 (43) 29.v.2008, genitalia det. — PJC & VFC
- 247 *Tinea trinotella* Thunb. — Sheskin Lodge F948261 (H27) 24.v.2008 — KGMB
- 278a *Opogona omoscopa* (Meyr.) — Skelton NZ6619 (62) 15.viii.2008, det. K. Sattler — D. Money *per* HEB, *Atropos* 37: 39-40. **New to England**

BUCCULATRICIDAE

- 265 *Bucculatrix cristatella* Zell. — Traethdy, Harlech SH574301 (48) 30.vii.2008, genitalia det. ANG — H. Bantock *per* ANG
- 267 *B. maritima* Staint. — Rochestown W741694 (H4) cocoons on grass stems 12.ix.2008 — KGMB; Mornington O1575 (H22) 21.ix.2008 — EO'D
- 271 *B. albedinella* Zell — Shotwick SJ340719 (58) 10.vi.2007 — D.C. Gardner *per* SHH
- 272 *B. cidarella* (Zell.) — Dowdeswell Wood SO9919 (33) vacated mine on *Alnus glutinosa* 12.viii.2008 — G.H.J. Meredith *per* RGG
- 273 *B. thoracella* (Thunb.) — Torpoint SX4354 (2) 24.vii.2008 — LACT; Hutton Conyers SE3273 (65) mines on *Tilia cordata* 4.ix.2008 — CHF; Hartburn, Stockton NZ424178 (66) 15.viii.2008 — JRD

ROESLERSTAMMIIDAE

- 447 *Roeslerstammia erxlebella* (Fabr.) — Strines SJ9786 (57) vacated mines on *Tilia* sp. 17.ix.2008 — SHH

GRACILLARIIDAE

- 280 *Caloptilia cuculipennella* (Hübn.) — Worcester SO 835534 (**37**) 24.vii.2008, genitalia det. and conf. ANBS — O. Wadsworth *per* ANBS; Glasbury on Wye SO181391 (**43**) 22.ix.2008 — PJC & VFC
- 281 *C. populetorum* (Zell.) — Puddletown SY7695 (9) 24.vii.2008, first VC record since doubtful record from 19th C. — H. Wood Homer *per* PHS; Stoke Common SU9885 (**24**) 1.viii.2008, genitalia det. conf. JC — P. Hall *per* MVA; Harris, Rum NM3396 (**104**) 10.viii.2004 — J. Mackay *per* KPB
- 283 *C. betulicola* (Her.) — Tentsmuir Forest NO4924 (**85**) a few tenanted spinnings on *Betula pendula* 19.vi.2008, moths bred — JRL
- 284 *C. rufipennella* (Hübn.) — Chandlers Ford SU219443 (11) tenanted spinning on *Acer campestre* 5.vi.2008, moth bred, previously unrecorded foodplant in Britain — JRL; Southsea SZ655989 (11) larval spinnings on *Acer saccharinum* 25.viii.2008, moth bred, previously unrecorded foodplant — JRL; Dale SM8105 (**45**) larval spinnings on *Acer pseudoplatanus* 7.vii.2008 — DJS *per* RE; Commins Coch SH845028 (**47**) 25.xi.2008 — PRW
- 285 *C. azaleella* (Brants) — Glenville, Talybont SH589220 (**48**) 25.vii.2008, genitalia det. ANG — J. Hicks *per* ANG
- 287 *C. robustella* Jäckh — Zeal Monachorum SS719039 (**4**) 29.viii.2008, genitalia det. RJH — SDB; Lake Vyrnwy SJ016192 (**47**) 26.vi.2007 — B. Holmes *per* PRW
- 294 *Aspilapteryx tringipennella* (Zell.) — Glasbury on Wye SO181391 (**43**) 11.viii.2007, det. NRL — PJC & VFC; Mornington O1575 (**H22**) 6.v.2008 — EO'D; Kilkeeran (south) M163720 (**H26**) tenanted mine on *Plantago lanceolata* — KGMB 27.vii.2008
- 296 *Calybites phasianipennella* (Hübn.) — Stamullen O146662 (**H22**) 28.viii.2008 — EO'D
- 302 *Parornix fagivora* (Frey) — Osborne Estate, SZ5194 (**10**) vacated larval folds on *Fagus* 12.x.2008 — DTB, BE & JRL
- 302a *P. carpinella* (Frey) — Lower Earley SU765708 (**22**) larval spinnings, one tenanted, on *Carpinus* 21.ix.2008 — IRS
- 313 *Acrocercops brongniardella* (Fabr.) — Penmyarth SO187201 (**42**) vacated mines on *Quercus ilex* 27.iv.2008 — JRL
- 321 *Phyllonorycter messaniella* (Zell.) — Commins Coch SH845028 (**47**) 16.x.2006 — PRW
- 325 *P. mespilella* (Hübn.) — Tramore S578014 (**H6**) 7.ix.2006, genitalia det. KGMB — TB
- 332 *P. corylifoliella* (Zell.) — Hyssington SO316939 (**47**) 31.vii.2000 — D.J. Poynton & I.F. Smith *per* PRW
- 332a *P. leucographella* (Zell.) — Bodelva SX0455 (**2**) mines on *Pyracantha* 12.ix.2008 — J. Gregory *per* LACT; Eynesbury TL181598 (29) mine on *Fagus sylvatica* 30.ix.2008, previously unrecorded foodplant — BD; Gregynog SO085975 (**47**) mines 3.ii.2007 — ANG *per* PRW; Barna M243367 (**H16**) mines on *Pyracantha* 22.v.2008 — KGMB; Mornington O1575 (**H22**) 12.ix.2008 — EO'D
- 336 *P. dubitella* (H. — S.) — Kithurst Hill TQ0612 (**13**) mines on *Salix caprea* 22.ix.2008, moths bred — RMP & JRL; Bushy Park TQ146697 (**21**) mine on *Salix caprea* 27.xi.2007, moth bred and genitalia det. — THF
- 343 *P. esperella* Goeze — Broomfield College, Morley SK3840 (**57**) mines on *Carpinus betulus* 8.xi.2008 — SHH

- 344 *P. strigulatella* (L. & Z.) — Tynemouth Priory NZ373692 (67) 28.viii.2008 — K.W. Regan *per* TJT
- 351 *P. lautella* (Zell.) — Cefn Cennarth RWT Reserve SN965757 (43) mines on *Quercus* sp. 20.ix.2008 — PJC & VFC
- 352 *P. schreberella* (Fabr.) — Ciltwrch SO160399 (43) mines on *Ulmus* sp. 28.ix.2008 — PJC & VFC
- 361 *P. trifasciella* (Haw.) — Tramore S578014 (H6) 30.ix.2007 — TB
- 363 *P. platanoidella* (Joann.) — Framwellgate Moor NZ264446 (66) 26.vii.2008 — T. Barker *per* AJW
- 366a *Cameraria ohridella* Deschk. & Dim. — Glasbury on Wye SO181389 (43) bred from mines on *Aesculus hippocastanum*, 10.viii.2007 — PJC & VFC; Grindleford SK2477 (57) mines on *Aesculus* 10.x.2008 — KPB
- 367 *Phyllocnistis saligna* (Zell.) — Fishponds Wood, Cwmbach SO167399 (43) 17.ix.2008, genitalia det. conf. JRL — PJC & VFC, **New to Wales**
- 367a *P. ramulicola* Langmaid & Corley — Botany Bay SU9734 & Sidney Wood TQ0234 (17) mines and cocoons on *Salix cinerea* & *S. caprea* 30.viii.2008 — JRL, RMP, GAC & J. Porter; Wokingham SU8265 (22) one mine in stem of *Salix cinerea* 12.xii.2008 — JRL & R. Hayward
- 368 *P. unipunctella* (Steph.) — Monkseaton NZ338723 (67) 28.vi.2008 — M.S. Hodgson *per* TJT

CHOREUTIDAE

- 386 *Tebenna micalis* (Mann) — Chaddesley Wood SO915737 (37) 4.x.2008 — M. Kennard *per* ANBS; Mwnt SN195521 (46) 20.viii.2008 — ANBS
- 387 *Prochoreutis sehestediana* (Fabr.) — Brassey NR SP1322 (33) 2.viii.2008, genitalia det. — G.H.J. Meredith *per* RGG
- 388 *P. myllerana* (Fabr.) — Scadsbury Meadow SS517015 (4) 28.viii.2008, genitalia det. RJH, first confirmed VC4 record as prior records could have been either this species or 387 *P. sehestediana* (Fabr.) — R. Wolton *per* RJH; Baltasound, Unst HP608086 (112) 29.vii.2008, genitalia det. JC — S. Priest *per* JC, Ent. Rec. 121: 84
- 389 *Choreutis pariana* (Cl.) — Llangynidr SO1520 (42) larva on *Malus domestica* 9.ix.2008 — JRL; Whitley Bay NZ350731 (67) 19.v.2008 — K.W. Regan *per* TJT; Near Tomchrasky NH2412 (96) vii.2008 det. MRY — J. Bowman *per* MRY

GLYPHIPTERIGIDAE

- 391 *Glyptipterix simpliciella* (Steph.) — Tramore Burrow S617004 (H6) 7.vi.2005 — TB
- 394 *G. forsterella* (Fabr.) — Trawscoed SH832330 (48) 15.vi.2008 — ANG & JEG; Meall Gruaim NN8968 (89) 16.vi.2008 — KPB
- 395 *G. haworthana* (Steph.) — Cors-y-Llyn SO016552 (43) 13.v.2008 — PJC & VFC; Tir Stent SH758168 (48) larvae in seedheads of *Eriophorum vaginatum* 9.x.2008 — ANG & JEG; Dahybaun G014191 (H27) 23.v.2008 — KGMB
- 397 *G. thrasonella* (Scop.) — Kilmarnock NS443365 (75) 6.vi.2008 — KGMB
- 470 *Orthotelia sparganella* (Thunb.) — Commins Coch SH845028 (47) 19.xi.2008 — PRW; Tramore S578014 (H6) 23.vii.2003 — TB

YPONOMEUTIDAE

- 405 *Argyresthia arceuthina* Zell. — Beinn Eige NG998637 (105) 16.vi.2008 — RJH

- 409a *A. trifasciata* Staud. — Hutton Conyers SE3273 (**65**) 2.vi.2008, det. HEB — CHF
- 409b *A. cupressella* Wals. — Afton (**10**) 7.vi.2008 — J. & J. Chainey *per* MJW
- 412 *A. pygmaeella* ([D. & S.]) — Pruglish G09100 (**H27**) 26.vii.2008 — KGMB
- 416 *A. glaucinella* Zell. — Cae Gwian SH648194 (**48**) 24.vi.2008, genitalia det. ANG — J. Hicks & H. Bantock *per* ANG
- 417 *A. spinosella* Staint. — Glasbury on Wye SO181391 (**43**) 8.vii.2006, det. NRL — PJC & VFC; Tramore X572999 (**H6**) 31.v.2007 — TB
- 425 *Yponomeuta padella* (Linn.) — Lettermaghera South L959981 (**H27**) 26.vii.2008 — KGMB
- 426 *Y. malinellus* (Zell.) — Commins Coch SH845028 (**47**) 30.vii.2005 — PRW
- 427 *Y. cagnagella* (Hübn.) — Glasbury on Wye SO181391 (**43**) 17.vii.2006 — PJC & VFC; Inchmarlo NO672970 (**91**) 28.vii.2007 — C. Holmes *per* MRY
- 428 *Y. rorrella* (Hübn.) — Glasbury on Wye SO181391 (**43**) 24.vii.2006 — PJC & VFC;
- 430 *Y. plumbella* ([D. & S.]) — Glasbury on Wye SO181391 (**43**) 25.viii.2007, genitalia det. — PJC & VFC
- 431 *Y. sedella* (Treits.) — Commins Coch SH845028 (**47**) 1.viii.2006 — PRW
- 435 *Zelleria hepariella* Staint. — Cardiff ST17248228 (**41**) 2.iv.2008 — DJS; Glasbury on Wye SO180389 (**43**) 10.x.2008 — PJC & VFC; Milngavie NS560745 (**99**) 2.v.2008 — JK
- 436 *Pseudoswammerdamia combinella* (Hübn.) — Glasbury on Wye SO181391 (**43**) 12.v. 2007 — PJC & VFC
- 440 *Paraswammerdamia albicapitella* (Scharf.) — Kilkeeran M164726 (**H26**) 27.vii.2008 — KGMB
- 441 *P. nebulella* Goeze — Zeal Monachorum SS719039 (**4**) 23.viii.2007, genitalia det. RJH — SDB; Ballaugh Curraghs SC364948 (**71**) 13.viii.2008 — R. Banks *per* ISS; Tramore S578014 (**H6**) 4.vii.2006 — TB
- 443 *Cedestis subfasciella* (Steph.) — Whitley Bay NZ350731 (**67**) 7.v.2008 — M.S. Hodgson *per* TJT
- 444 *Ocnerostoma pinariella* Zell. — Eaton Ford (**30**) 23.vi.2008, genitalia det. BD — A.A. Lawrence *per* DVM
- 449b *Prays peregrina* Agassiz — Ilford (**18**) 14.ix.2008 — K. Black *per* DJA
- 449c *P. oleae* Bernard — Grain TQ8876 (**16**) 22.vii.2008 — A.G.J. Butcher *per* DJLA, Ent. Rec. 121:199-201, **New to the British Isles**
- 252 *Ochsenheimeria urella* F. v R. — Spurn TA4115 (**61**) dead in water trough 1.ix.2008 det. HEB — B.R. Spence *per* HEB
- 455 *Y. scabrella* (Linn.) — Stamullen O146662 (**H22**) 14.ix.2008 — EO'D
- 458 *Y. alpella* ([D. & S.]) — Mount Edgcumbe CP SX455531 (2) 30.viii.2008, det. RJH, first VC record since VCH — D. Allan *per* LACT
- 462 *Y. sequella* (Cl.) — Tynewydd, nr. Llanfyllin SJ157210 (**47**) 18.ix.2008 — MDH *per* PRW; Glasbury Kippford NX837550 (**73**) 27.ix.2008 — MRH
- 463 *Y. vittella* (Linn.) — Cwm Byddog RWT Reserve SO215448 (**43**) 31.vii.2007, det. NRL — PJC & VFC
- 465 *Plutella porrectella* (Linn.) — Broadford R338220 (**H8**) 12.x.2008 — KGMB; Ninch O151712 (**H22**) 13.v.2008 — EO'D
- 466 *Rhigognostis senilella* (Zett.) — Commins Coch SH845028 (**47**) 23.viii.2006 — PRW
- 468 *R. incarnatella* (Steud.) — Bealkelly Wood R670827 (**H9**) 3.iv.2008 — KGMB

- 472 *Digitivalva pulicariae* (Klim.) — Glasbury on Wye SO181391 (43) 30.iv.2005, det. NRL — PJC & VFC
- 473 *Acrolepiopsis assectella* (Zell.) — Zeal Monachorum SS719039 (4) larvae on *Allium porrum*, 26.vii.2008, moths reared — SDB
- 476 *Acrolepia autumnitella* Curtis — Brynryrhydd SO189415 (43) bred from mines on *Solanum dulcamara* 7.x.2008 — PJC & VFC

COLEOPHORIDAE

- 490 *Coleophora lutipennella* (Zell.) — Ciliau SO108430 (43) 13.vii.2007, genitalia det. — PJC & VFC
- 494a *C. prunifoliae* Doets — Gait Barrows SD4877 (60) cases on *Prunus spinosa* 12.v.2008, moth bred, genitalia det. — SMP
- 495 *C. spinella* (Schr.) — Bill Smyllie Reserve SO9923 (33) case on *Crataegus* 18.v.2008 — M. Kennard per RGG
- 497 *C. badiipennella* (Dup.) — Cwm Byddog RWT Reserve SO215448 (43) 31.vii.2007, genitalia det. — PJC & VFC
- 498 *C. alnifoliae* (Bar.) — Dowdeswell Wood SO9919 (33) case on *Alnus glutinosa* 12.viii.2008 — G.H.J. Meredith per RGG
- 504 *C. lusciniaeepennella* (Treits.) — Bryn Awel, Lake Vyrnwy SJ071191 (47) 12.v.2007, B. Holmes per PRW; Derrygoolin South R702918 (H15) larval feeding signs on *Myrica gale* 26.ix.2008 — KGMB
- 513 *C. potentillae* Elisha — Morrich More NH8384 (106) case on *Potentilla erecta* 30.viii.2008 — RJH
- 517a *C. frischella* (Linn.) — Sawbridgeworth Marsh NR TL4915 (20) 29.v.2004, genitalia det. BG — CWP, *Ent. Rec.* 121: 134-135
- 518 *C. mayrella* (Hübn.) — Commins Coch SH845028 (47) 5.viii.2007 — PRW
- 526 *C. laricella* (Hübn.) — Mount Russell R619191 (H8) cases on *Larix* 18.x.2008 — KGMB
- 551 *C. galbulipennella* Zell. — Ipswich TM208432 (25) 31.vii.2008, genitalia det. JC — N. Sherman, *Ent. Rec.* 121: 83-84
- 553 *C. striatipennella* Nyl. — Cwm Byddog RWT Reserve SO215448 (43) 10.vi.2007, genitalia det. — PJC & VFC
- 554 *C. inulae* Wocke — Spurn TA4115 (61) 26.vii.2008, genitalia det., conf. HEB — B. R. Spence per HEB
- 555 *C. follicularis* (Vallot) — Trowbridge ST8658 (8) cases on *Inula helenium* 2.vii.2008, moths bred and genitalia det., previously unrecorded foodplant — EGS & MHS, *Ent. Rec.* 121: 42-43
- 556 *C. trochilella* (Dup.) — Spurn TA4115 (61) 25.vii-16.viii.2008 genitalia det., conf. HEB — B. R. Spence per HEB
- 560 *C. paripennella* Zell. — Whiting Ness NO6641 (90) 21.vi.2008 — KPB; Ardrishaig NR8484 (101) 2.vi.2008 — KPB
- 561 *C. therinella* Tengst. — Roughdown Common, Hemel Hempstead TL 0405 (20) 25.vi.2004, genitalia det. BG — CWP
- 565 *C. saxicolella* (Dup.) — Charlton Kings SO7921 (33) 20.viii.2008, genitalia det. A. Prior — R. Ward per RGG
- 577 *C. artemisicolella* Bru. — Spurn TA4115 (61) 26.vii.2008 genitalia det., conf. HEB — B. R. Spence per HEB
- 578 *C. otidipennella* (Hb.) — Llowes SO194419 (43) 9.v.2008, genitalia det. — PJC & VFC

- 552 *C. lassella* Staud. — Icklesham TQ885159 9 (**14**) 7.vi.2008, genitalia det. MSP — I. Hunter *per* MSP
- 583 *C. tamesis* Waters — Dale SM8005 (**45**) 6.vi.2008, genitalia det. — DJS *per* RE; Spurn TA4115 (**61**) 26.vi-13.vii.2008 genitalia det., conf. HEB — B. R. Spence *per* HEB
- 587 *C. caespititiella* Zell. — Pont Lloegel SSSI SJ032154 (**47**) 17.viii.2003 — J. Marshall *per* PRW; Skelton NZ6619 (**62**) 2008, genitalia det. HEB — D. Money *per* HEB
- 588 *C. salicorniae* Hein. & Wocke — Pembrey Salttings SS4299 (**44**) 27.vii.2008, genitalia det. — JSB

ELACHISTIDAE

- 603 *Elachista subnigrella* (Dougl.) — Commins Coch SH845028 (**47**) 24.vi.2006 — PRW
- 606 *E. humilis* Zell. — Glasbury on Wye SO181391 (**43**) 23.ix.2006, det. NRL — PJC & VFC
- 608 *E. rufocinerea* (Haw.) — Mornington O1575 (**H22**) 6.v.2008 — EO'D
- 610 *E. argentella* (Cl.) — Cullamore H585474 (**H36**) 7.vi.2008 — KGMB
- 613 *E. subocellea* (Steph.) — Chambers Farm Wood, Wragby TF1474 (**54**) 2.viii. 2008 — CS
- 621 *E. subalbidella* Schl. — Dahybaun G014191 (**H27**) 23.v.2008 — KGMB
- 622 *E. adscitella* Staint. — Cury SW67212215 (**1**) 6.v.2008 — F. Johns *per* MT, *Atropos* 36: 37; Pryme Plantation, Chedington ST5007 (**9**) 1.vii.2008 — PHS
- 623 *E. bisulcella* (Dup.) — Hutton Conyers SE3273 (**65**) 26.viii.2008, genitalia det. HEB — CHF
- 627 *Biselachista scirpi* (Staint.) — Icklesham TQ885159 (**14**) 3.viii.2008, genitalia det. MSP — I. Hunter *per* MSP
- 628 *B. eleochariella* (Staint.) — Morrich More NH847832 (**106**) 30.viii.2008, genitalia det. — RJH
- 632 *Cosmiotes consortella* (Staint.) — Cheltenham SO9519 (**33**) 9.v.2008, genitalia det. — G.H.J. Meredith *per* RGG

OECOPHORIDAE

- 635 *Denisia subaquilea* (Staint.) — Ordiquhill, near Cornhill NJ575556 (**94**) 7.vi.2008 — R. Leverton *per* MRY
- 642 *Batia unitella* (Hübn.) — Hutton Conyers SE3273 (**65**) 26.viii.2008, det HEB — CHF
- 652 *Alabonia geoffrella* (Linn.) — Bow SS714018 (**4**) 31.v.2008 — SDB
- 656 *Tachystola acroxantha* (Meyr.) — Pilning ST5584 (**34**) 6.v.2008 — J.P. Martin *per* RGG; Heysham SD4059 (**60**) 12.vii.2008 det. SMP — A. J. Draper *per* SMP
- 658 *Carcina quercana* (Fabr.) — Lettermaghera South L959981 (**H27**) 26.vii.2008 — KGMB
- 661 *Pseudatemelia flavifrontella* ([D. & S.]) — Commins Coch SH845028 (**47**) 30.vi.2006 — PRW
- 664 *Diurnea lipsiella* ([D. & S.]) — Commins Coch SH845028 (**47**) 23.x.2006 — PRW; Tramore S578014 (**H6**) 8.xi.2007 — TB
- 666 *Semioscopis avellanella* ([D. & S.]) — Commins Ccch SH845028 (**47**) 21.iv.2006 — PRW

- 667 *S. steinkellneriana* ([D. & S.]) — Ripon Parks SE3075 (64) 25.iv.2008, det. HEB — CHF
- 670 *Depressaria daucella* ([D. & S.]) — Otmoor SP5613 (23) 27.ix.2008 — MCH; Lunan Bay NO690513 (90) larvae on *Oenanthe crocata* 20.vi.2008 — JRL
- 671 *D. ultimella* Staint. — Glasbury on Wye SO165385 (43) 22.v.2007 — PJC & VFC
- 676 *D. pulcherrimella* Staint. — Dancersend SP8909 (24) 25.viii.2008, genitalia det. — P. Hall per MVA; Callowbrack L992987 (H27) 26.vii.2008, genitalia det. — KGMB
- 692 *Agonopterix subpropinquella* (Staint.) — Commins Coch SH845028 (47) 27.x.2005 — PRW
- 696 *A. propinquella* (Treits.) — Glasbury on Wye SO181391 (43) 3.v.2007 — PJC & VFC; Broadford R338220 (H8) 12.x.2008 — KGMB
- 701 *A. ocellana* (Fabr.) — Llandrindod Wells SO068612 (43) 29.i.2008 det. PJC & VFC — I. Standen & R. Standen per PJC & VFC; Tentsmuir NNR NO499274 (85) 26.iv.2008 — DWWD
- 704 *A. scopariella* (Hein.) — Weston under Wetherley - Weston Wood SP353700 (38) 14.iii.2008, genitalia det. — M. Kennard per NJS
- 705 *A. umbellana* (Fabr.) — Berwyn, Afon Nadroedd SH956256 (47) larval spinnings on *Ulex galii* 28.vi.2005 — ANG & JEG per PRW
- 710 *A. conterminella* (Zell.) — Carrickavrantry S550021 (H6) 3.viii.2008 — TB
- 715 *A. capreolella* (Zell.) — Winspit SY9776 (9) 29.viii.2008, genitalia det. PHS, first VC record since 19th C. — P.A. Davey per PHS
- 716 *A. rotundella* (Dougl.) — Pennington SJ6598 (59) 1.ix.2003, det. SMP — P. Pugh per SMP; Tramore Burrow S617004 (H6) 24.ix.2006 — TB

ETHMIIDAE

- 719 *Ethmia quadrillella* (Goeze) — Woodnewton TL0394 (32) 5.vii.2008 — N. Smith per DVM
- 720 *E. bipunctella* (Fabr.) — Leicester SK641036 (55) 27.viii.2008 — AJM
- 722 *E. pyrausta* (Pall.) — Loch Morie NH549753 (106) 8.v.2008, det. MRY — A. Scott & M. Currie per MRY

GELECHIIDAE

- 726 *Metzneria metzneriella* (Staint.) — Mornington O1575 (H22) 6.vi.2008 — EO'D
- 729 *Isophrictis striatella* ([D. & S.]) — Kenilworth SP286711 (38) 28.vii.2008, genitalia det. — M. Kennard per NJS
- 731a *Eulamprotes immaculatella* (Dougl.) — Traethdy, Harlech SH574301 (48) 8.v.2008, genitalia det. ANG — H. Bantock per ANG
- 733 *E. wilkella* (Linn.) — Tramore Burrow S617004 (H6) 12.vii.2006 — TB
- 728 *Monochroa cytisella* (Curt.) — Bushy Park TQ155695 (21) 1.viii.2007, genitalia det., first VC record with data — THF; Commins Coch SH845028 (47) 3.vii.2005 — PRW; Calf of Man Bird Observatory SC156658 (71) 20.vi.2008 — R. Cope & I. Lycett per ISS
- 735 *M. tenebrella* (Hübn.) — Daneway SO9403 (33) 8.vii.2008, genitalia det. — G.H.J. Meredith per RGG
- 737 *M. palustrella* (Dougl.) — Upwell TF502028 (28) 24.vii.2008, det. JC & JW from photograph — P. Millard per JRW, Ent. Rec. 121: 38-39
- 741 *M. suffusella* (Dougl.) — Pirbright Ranges SU9358 (17) in *Eriophorum* bog 23.vi.2008 — GAC; Lynford Arboretum TL822938 (28) 15.vii.2008, genitalia det. JC — JRW, Ent. Rec. 121: 38-39

- 747 *Chrysoesthia sexguttella* (Thunb.) — Gann SM8107 (45) tenanted mines 1.vii.2008, moths bred — DJS per RE
- 778 *Bryotropha umbrosella* (Zell.) — Tramore Burrow S617004 (H6) 16.vii.2006 — TB
- 779 *B. affinis* (Haw.) — Lake Vyrnwy SH9822 (47) 16.ix.2007, D. Atherton per PRW; Ordiquihill, near Cornhill NJ575556 (94) 1.vii.2008 — R. Leverton per MRY
- 782 *B. senectella* (Zell.) — Commins Coch SH845028 (47) 11.viii.2005 — PRW
- 789 *B. domestica* (Haw.) — Glasbury on Wye SO181391 (43) 28.vii.2007 — PJC & VFC; Maes yr Haf, Newport SN05713896 (45) 19.viii.2008 — ADL; Commins Coch SH845028 (47) 5.ix.2006 — PRW
- 760 *Exoteleia dodecella* (Linn.) — Tynemouth NZ364705 (67) 27.viii.2008 — TJT; Raheen Wood R64127 (H9) 24.vii.2008 — KGMB
- 770 *Carpatolechia proximella* (Hübn.) — NT Sherborne Estate SP1815 (33) 20.vi.2008, genitalia det. — G.H.J. Meredith per RGG; Sheskin Lodge F948261 (H27) 24.v.2008, genitalia det. — KGMB
- 771 *C. alburnella* (Zell.) — Silverdale SD4675 (60) 19.vii.2008, genitalia det. SMP — E. Langrish & D. Bennett per SMP
- 772 *C. fugitivella* (Zell.) — Glasbury on Wye SO181391 (43) 11.vii.2007, det. NRL — PJC & VFC
- 776 *Teleiopsis diffinis* (Haw.) — Kinnaber Links NO7361 (90) 21.vi.2008 — MWH, MRY & JRL
- 792 *Mirificarma mulinella* (Zell.) — Commins Coch SH845028 (47) 31.vii.2006 — PRW
- 800 *Gelechia rhombella* (D. & S.) — Glasbury on Wye SO181391 (43) 17.viii.2008, genitalia det. — PJC & VFC
- 801a *G. senticetella* (Staud.) — Plympton SX542571 (3) 24.vii.2008 — RJH; Findon TQ128077 (13) 25.vii.2008 — M. Snelling per CRP
- 808 *Platyedra subcinerea* (Haw.) — Earith TL390751 (31) 10.v.2008, genitalia det. BD — D. Griffiths per BD
- 809 *Pexicopia malvella* (Hübn.) — Black Park TQ0184 (24) 14.vi.2008, genitalia det. R. Terry — D. Howdon & A. Culshaw per MVA
- 819 *Scrobipalpa costella* (H. & W.) — Commins Coch SH845028 (47) 19.ix.2005 — PRW; Aberdeen NJ9306 (92) 27.viii.2008 — N. Littlewood per MRY
- 825 *Phthorimaea operculella* (Zell.) — Tramore S578014 (H6) 28.ix.2006, conf. KGMB — TB, **New to Ireland**
- 826 *Caryocolum vicinella* (Dougl.) — Whiting Ness NO6641 (90) 21.vi.2008 — KPB
- 844 *Syncopacma larseniella* (Gozm.) — Park Wood, Talgarth SO1633 (42) larvae on *Lotus corniculatus* 27.v.2008, moths bred, genitalia det. — JRL
- 849 *S. cinctella* (Cl.) — Tynemouth NZ364705 (67) 21.vi.2008, genitalia det. M.R. Honey — TJT
- 797 *Neofaculta ericotella* (Geyer) — Glasbury on Wye SO181391 (43) 1.v.2007, det. NRL — PJC & VFC; Glenanair East R661162 (H8) 15.v.2008 — KGMB; Cullamore H585473 (H32) 7.vi.2008 — KGMB
- 851 *Dichomeris alacella* (Zell.) — Wembley (21) 29.vi.2008, genitalia det. CWP — G. Geiger per CWP
- 855 *Acompsia cinerella* (Cl.) — Tramore Burrow S617004 (H6) 19.viii.2006 — TB; Mornington O1575 (H22) 11.vii.2008 — EO'D
- 868 *Helcystogramma rufescens* (Haw.) — Mornington O1575 (H22) 8.vii.2008 — EO'D
- 840 *Thiotricha subocellea* (Steph.) — Holtspur Bottom SU9190 (24) 4.vii.2008, genitalia det. — P. Hall per MVA

AUTOSTICHIDAE

- 870 *Oegoconia quadripuncta* (Haw.) — Zeal Monachorum SS719039 (4) 28.vii & 7.viii.2007, 25.vii.2008 one at light on each date, genitalia det. RJH, this is the first confirmed VC4 record of a species which had been recorded in VC4 under this name as long ago as 1909 (1912 *Entomologist* 45: 37-38) but until now such records had not been confirmed by genitalic examination — SDB; Cottingham TA0532 (61) 1.viii.2008 genitalia det. HEB — A. Ashworth per HEB
- 871 *O. deauratella* (H.-S.) — Storrington TQ078142 (13) 15.vii.2008, male genitalia det. — RMP

BLASTOBASIDAE

- 873 *Blastobasis adustella* Wals. — Stanner Rocks SO261583 (43) 17.viii.2008, genitalia det. — PJC & VFC; Commins Coch SH845028 (47) 19.vii.2005 — PRW
- 874 *B. lacticolella* Rebel — Peatlands Park H896605 (H37) 1.vi.2008 — KGMB
- 875a *B. rebeli* Karsh. & Sinev — Lindfield TQ348 248 (13) 7.viii.2007 — RWF

BATRACHEDRIDAE

- 878 *Batrachedra praeangusta* (Haw.) — Bosherston Lily Ponds SR9794 (45) 17.vi.2000 — S.D.S. Bosanquet per ADL
- 879 *B. pinicolella* (Zell.) — Laver Banks MoD (64) 2.vii.2008, det. HEB — CHF, J.C. Warwick & S.P. Worwood

MOMPHIDAE

- 880 *Mompha langiella* (Hübn.) — Jubilee Wood SP0731 (33) vacated mines on *Circaeа lutetiana* 28.vi.2008 — G.H.J. Meredith per RGG
- 881 *M. terminella* (H. & W.) — Dalton SD5476 (60) vacated mine on *Circaeа lutetiana* 3.ix.2008, first published county record — SMP
- 883 *M. raschkiella* (Zell.) — Kilneny Farm, Islay NR3865 (102) 3.vi.2008 — KPB
- 884 *M. miscella* ([D. & S.]) — Rugby - Malpass Farm Quarry SP48947595 (38) 1.vii.2008, genitalia det. — A. Prior per NJS
- 885 *M. conturbatella* (Hübn.) — Tynewydd, nr. Llanfyllin SJ157210 (47) 11.vii.2008 — M.D. Haigh per PRW; Ardrishaig NR8484 (101) vacated larval workings on *Chamerion* 2.vi.2008 — KPB
- 887 *M. lacteella* (Steph.) — Stubhampton Bottom ST8915 (9) 10.vi.2008, genitalia det. PHS, first VC record since 19th C. — P.A. Davey per PHS; Maes yr Haf, Newport SN05713896 (45) 9.vi.2008, genitalia det. JRL — ADL
- 888 *M. propinquella* (Staint.) — Commins Coch SH845028 (47) 19.vii.2005 — PRW; Tramore S578014 (H6) 3.viii.2006 — TB; Tarmon F269204 (H27) 25.vii.2008 — KGMB
- 889a *M. bradleyi* Riedl — Earls Barton SP8564 (32) 28.iv.2008, genitalia det. DVM — C. Barnes per DVM
- 891 *M. sturnipennella* (Treits.) — Walter's Ash SU89 (24) 18.iii.2008, genitalia det. P.R. Hall — N. Fletcher, *Ent. Rec.* 121: 74
- 892 *M. subbistrigella* (Haw.) — Glasbury on Wye SO181391 (43) 3.v.2007, genitalia det. — PJC & VFC; Commins Coch SH845028 (47) 17.vi.2006 — PRW; Kittochside NS6156 (77) 16.v.2007 — K. Simes per KPB

COSMOPTERIGIDAE

- 898 *Limnaecia phragmitella* Staint. — Marsland SS230172 (2) 25.vii.2008 — S. Ogden per LACT; Glasbury on Wye SO181391 (43) 30.vi.2007 — PJC & VFC; Welshpool SJ220104 (47) 26.vii.2005 — D. Chesmore per PRW; Tramore Burrow S617004 (H6) 5.vii.2006 — TB
- 900 *Pancalia schwarzella* (Fabr.) — Braunton Burrows (4) 12.vii.2008 a few larvae in tubes amongst *Homalothecium lutescens* leading to leaves of *Viola hirta* and *V. canina*, moths reared March 2009, genitalia det. — SDB & RJH
- 905 *Blastodacna hellerella* (Dup.) — Commins Coch SH845028 (47) 16.vi.2006 — PRW
- 906 *B. atra* (Haw.) — Earith TL390751 (31) 16.vii.2008, det. BD — D. Griffiths per BD
- 909 *Sorhagenia lophyrella* (Dougl.) — Roughdown Common, Hemel Hempstead TL 0405 (20) 25.vi.2004, genitalia det. BG — CWP

TORTRICIDAE

- 924 *Hysterophora maculosana* (Haw.) — Cnwc y Llwyn, Brechfa SN5131 (44) 1.vi.2008 — S.D.S. Bosanquet per JSB; Tramore Burrow S617004 (H6) 16.v.2007 — TB
- 925 *Phtheochroa rugosana* (Hb.) — Glasbury on Wye SO181391 (43) 26.vi.2007, det. NRL — PJC & VFC
- 926 *Phalonidia manniana* (F. v. R.) — Staveley NR SE3663 (64) 23.vii.2008, genitalia det. HEB — CHF
- 928 *Gynnidiomorpha permixtana* ([D. & S.]) — Braunton Burrows (4) 25.vii.2007 first confirmed VC4 record, genitalia det. RJH — SDB; same locality 23.viii.2008 several larvae in seedpods of *Odontites vernus*, seven moths reared 23.ix-13.x.2008, genitalia det., apparently the first confirmed record of the larva and foodplant in the British Isles — SDB & RJH
- 929 *G. vectisana* (H. & W.) — Streedagh G635504 (H28) 30.v.2008, genitalia det. — KGMB
- 936 *Cochylimorpha straminea* (Haw.) — Glasbury on Wye SO181391 (43) 24.viii.2006, det. NRL — PJC & VFC
- 937 *Agapeta hamana* (Linn.) — Kilkeeran M164726 (H26) 27.vii.2008 — KGMB
- 938 *A. zoegana* (Linn.) — Mornington O1575 (H22) 1.vii.2008 — EO'D; Kilkeeran (south) M163720 (H26) 27.vii.2008 — KGMB
- 942 *Aethes piercei* Ob. — Ballowfields NR SD9889 (65) 18.vii.2008, det. HEB — CHF, J.C. Warwick, S.P. Warwick
- 946 *A. rubigana* (Treits.) — Lamphey SN0100 (45) 23.vii.2008 — RE; Commins Coch SH845028 (47) 22.vi.2004 — PRW
- 947 *A. smethmanniana* (Fabr.) — Ballaugh SC359955 (71) 14.viii.2008 — R. Banks per ISS
- 950 *A. francillana* (Fabr.) — Great Newtown Head X569989 (H6) 12.vii.2007 — TB
- 951a *A. bilbaensis* (Rössler) — Zeal Monachorum SS719039 (4) 24.vii.2008, genitalia det. RJH — SDB, **New to the British Isles**
- 954 *Eupoecilia angustana* (Hübn.) — Commins Coch SH845028 (47) 17.vi.2008 — PRW
- 959 *Cochylidia rupicola* (Curt.) — Cockayne Hatley TL2549 (30) in RIS trap 23-29.vii.2008, genitalia det. — DVM
- 960 *Falseuncaria ruficiliana* (Haw.) — Glasbury on Wye SO181391 (43) 31.viii.2005, genitalia det. NRL — PJC & VFC; Drumsheen G352187 (H26) 24.v.2008, genitalia det. — KGMB; Cullamore H585473 (H32) 7.vi.2008, genitalia det. — KGMB

- 963 *Cochylis flavigiliana* (Westw.) — Kilkeeran M164724 (**H26**) 27.vii.2008 — KGMB
- 964 *C. dubitana* (Hübn.) — Tynemouth NZ364705 (**67**) 20.vii.2008 — TJT; Mornington O1575 (**H22**) 2.vii.2008 — EO'D
- 964a *C. molliculana* Zell. — Luton TL0725 (**30**) 29.viii.2008, det. DVM — H. Griffiths per DVM
- 968 *C. nana* (Haw.) — Millook Woods SX1899 (**2**) 7.vii.2008 — G. Davis per LACT
- 969 *Pandemis corylana* (Fabr.) — Killotteran S555115 (**H6**) 27.viii.2008 — KGMB
- 971 *P. cinnamomeana* (Treits.) — Commins Coch SH845028 (**47**) 14.vii.2004 — PRW
- 972 *P. heparana* ([D. & S.]) — Kilkeeran M164724 (**H26**) 27.vii.2008 — KGMB
- 974 *Argyrotaenia ljungiana* (Thunb.) — Loch Ba NN397497 (**98**) 2.vi.2008 — KGMB
- 985 *Cacoecimorpha pronubana* (Hübn.) — Glasbury on Wye SO181391 (**43**) 13.vii.2005 — PJC & VFC; Stamullen O146662 (**H22**) 9.vi.2008 — EO'D
- 986 *Syndemis musculana* (Hübn.) — Dahybaun G014191 (**H27**) 23.v.2008 — KGMB
- 987 *Ptycholomoides aeriferanus* (H. S.) — Commins Coch SH845028 (**47**) 6.vii.2004 — PRW
- 991 *Clepsis senecionana* (Hübn.) — Graig Upper R659118 (**H5**) 15.v.2008 — KGMB
- 993 *C. spectrana* (Treits) — Glasbury on Wye SO181391 (**43**) 8.ix.2008 — PJC & VFC
- 998 *Epiphyas postvittana* (Walk.) — Glasbury on Wye SO181391 (**43**) 17.vii.2006 — PJC & VFC; Commins Coch SH845028 (**47**) 3.x.2003 — PRW; Fallin NS836919 (**86**) 29.v.2008 — B. & H. Dawson per JK
- 1000 *Ptycholoma lecheana* (Linn.) — Glasbury on Wye SO181391 (**43**) 13.vii.2005 — PJC & VFC
- 1001 *Lozotaeniodes formosanus* (Geyer) — Zeal Monachorum SS719039 (**4**) 3.vii.2007 — SDB
- 1006 *Epagoge grotiana* (Fabr.) — Commins Coch SH845028 (**47**) 17.vii.2005 — PRW; Burnt Wood, Treeton SK4488 (**63**) two 14.vii.2008 — HEB; Lettermaghera South L959981 (**H27**) 26.vii.2008 — KGMB
- 1007 *Capua vulgana* (Fröl.) — Drumsheen G352187 (**H26**) 24.v.2008 — KGMB; Tamlaght H266410 (**H33**) 8.vi.2008 — KGMB
- 1015 *Eulia ministrana* (Linn.) — Craigellachie NJ3044 (**94**) 9.vi.2008 — R. Leverton per MRY
- 1016 *Cnephasia longana* (Haw.) — Anstruther NO5803 (**85**) viii.2007 — A. Smout per KPB
- 1019 *C. conspersana* (Dougl.) — Mornington O1575 (**H22**) 8.vii.2008, genitalia det. JC — EO'D; Kilkeeran (south) M163720 (**H26**) 27.vii.2008, genitalia det. — KGMB
- 1020 *C. stephensiana* (Doubl.) — Glasbury Cutting BWT Reserve SO183393 (**43**) 10.vii.2005 — PJC & VFC
- 1023 *C. genitalana* (P. & M.) — South Croydon TQ3363 (**17**) 6.viii.2008, genitalia det. — GAC
- 1026 *Exapate congelatella* (Cl.) — Crossgates SO090654 (**43**) 13.x. 2007, det. PJC & VFC — R. W. Dennison per PJC & VFC
- 1032 *Aleimma loeflingiana* (Linn.) — Longmuir NT026735 (**84**) 25.vii.2008, det. MRY — G. Fitchett per MRY
- 1035 *Acleris bergmanniana* (Linn.) — Stamullen O146662 (**H22**) 27.vi.2008 — EO'D
- 1037 *A. holmiana* (Linn.) — Glasbury on Wye SO181391 (**43**) 23.vii.2007 — VFC
- 1041 *A. sparsana* ([D. & S.]) — Tynewydd, nr. Llanfyllin SJ157210 (**47**) 21.ix.2008 — M.D. Haigh per PRW; Lunan Bay NO690513 (**90**) larvae on *Acer pseudoplatanus* 20.vi.2008 — JRL; Mornington O1575 (**H22**) 20.ix.2008 — EO'D



SOCIETY MATTERS



THANK YOU: The Society is very grateful to all those members and friends who helped out at this year's Annual Exhibition. We will not name names in case we miss anyone out, but you (and we!) know who you are.

We would also like to thank all those people who have kindly made donations to the Society during the year. Many members have taken the opportunity to include a donation with their membership renewals, and donations 'in kind' have ranged from large quantities of stick insects to give away to budding entomologists at the exhibition to an 'as new', fully functional moth trap, generously donated to the Bug Club by Peter Baker. We also continue to receive donations specifically for the new Michael Majerus Fund.

EXTERNAL FUNDING: We are pleased to announce that we have received a grant of £800 from the OPAL project (Open Air Laboratories <http://www.opalexplorenature.org/>) towards the cost of promotional materials and IT equipment. In addition, we have acted on behalf of the Tachinid Recording Group so that they could obtain an OPAL grant of £2000 towards essential equipment which will place their activities on a firm footing. We have also received £1000 from the W.F. Southall Trust, which will enable Council member David Tatham to progress an AES Bug Garden project with a local scout group.

JUNIOR EXHIBITS at the 2009 exhibition: Exhibit details will be described separately (in the *AES Bulletin*) but it is worth noting that we had a bit of a problem this year with the junior exhibits. There was a good turnout of Bug Clubbers, but it proved unusually difficult to decide which exhibit should not receive a prize, as they were all so very good, and in very different ways. Which is a good problem to have, really.

ISPOT: Members of the Society who wish to participate in this new web project (www.ispot.org.uk/) by posting images for identification or to help identify insects from photos posted by others are kindly asked to get in touch with Martin Harvey (m.c.harvey@open.ac.uk) so that they can be 'badged' as AES members on the site.





AES Events Calendar



Please see the AES website for full and up to date listings of AES and other events.
All AES events are free to members and their guests.

*Further details can also be obtained from the Secretary by post or via email
(secretary@amentsoc.org)*

Saturday 20th February 2010:

YOUNG ENTOMOLOGISTS' DAY & OXFORD UNIVERSITY

Oxford University Museum of Natural History, Parks Road, Oxford OX1 3PW.
11:00 – 4:00.

This will be the first event to mark the 75th anniversary of the AES in 2010. The day will be kick-started by Dr George McGavin, and Bug Club members and others between the ages of 4 and 18 will be showing exhibits and/or giving short talks in the Museum's lecture theatre. (Prizes will be awarded for the best presentations – those wanting to give a talk should contact the AES Secretary (secretary@amentsoc.org) in the first instance to get a copy of the judging criteria for the talks). There will also be tours of the Hope Collections and AES, National Insect Week and NHM stands. There is no charge for admission to members and their guests.

Saturday 24th April 2010:

AES MEMBERS' DAY & AGM

Angela Marmont Centre for UK Biodiversity, The Darwin Building, Natural History Museum, London.

Our 75th Anniversary Members' Day will include talks, workshops, displays, members' exhibits, 'behind-the-scenes' tours, a children's insect crafts table and a chance to meet museum staff and find out what new resources are available to entomologists throughout the year at the new Darwin extension. More details will appear in the next issue.

*Details of other events planned for the coming year
will be included in forthcoming issues of this journal.*



AES Membership Rates 2010

Membership of the Society runs from 1st January to 31st December each year. New members will receive all publications published during the year of enrolment subject to availability, except for those joining on or after 1st October.

Members joining on or after 1st October will be deemed to have joined for the following year unless a specific request for membership of the current year is made. In such cases, the publications already published that year will be sent with the enrolment confirmation letter and the remaining ones received as they are published. A further membership subscription will be necessary for the following year.

If you have any queries about membership please contact us via the website, www.amentsoc.org or PO Box 8774, London SW7 5ZG

Individual Adult Membership

Membership sub-category	UK	Overseas
Bulletin only	£20.00	£25.00
Entomologist's Record only	£25.00	£30.00
Bug Club Magazine only	£20.00	£25.00

Individual Bug Club / Junior Membership

Membership sub-category	UK	Overseas
Junior under-18 (Bug Club Magazine only)	£12.00	£17.00
Junior aged 13-17 (Bulletin only)	£12.00	£17.00

Family or Combined Membership

Membership sub-category	UK	Overseas
Bulletin & Entomologist's Record	£40.00	£45.00
Bulletin & Bug Club Magazine	£28.00	£33.00
Entomologist's Record & Bug Club Magazine	£35.00	£40.00
Bulletin, Entomologist's Record & Bug Club Magazine	£48.00	£53.00

Associate / Institutional Membership

Membership sub-category	UK	Overseas
Bulletin only	£20.00	£25.00
Entomologist's Record only	£50.00	£55.00
Bug Club Magazine only	£20.00	£25.00
Bulletin & Entomologist's Record	£65.00	£70.00
Bulletin & Bug Club Magazine	£28.00	£33.00
Entomologist's Record & Bug Club Magazine	£65.00	£70.00
Bulletin, Entomologist's Record & Bug Club Magazine	£75.00	£80.00

The Amateur Entomologists' Society

PO Box 8774, London SW7 5ZG

www.amentsoc.org

If you have any problem working out your subscription please email the Registrar at registrar@amentsoc.org for advice.

AES Publications

Amateur
Entomologists' Society

British Butterflies throughout the year by Peter May

This new book from the AES describes the adults of different species of British butterflies, according to the time of year they appear on the wing. Nearly all the 60 British species are illustrated. Focussing on encouraging an interest in entomology among the young, and the young at heart, there is a helpful calendar of flight times and a useful checklist to help you keep track of your observations.

£ 5.00

Members price £ 3.80

Preparing and maintaining a collection of Butterflies and Moths

by P. May and M. White. A practical manual detailing the various methods used to prepare specimens for a collection, from killing methods, setting the specimens and repairing damaged ones, to storage and preservation, including pest prevention and cure. 21 pages. 4 figures and 5 plates. (2006)

£ 4.85

Members price £ 3.65

The Hymenopterist's Handbook by Dr. C. Betts et. al.

2nd edition dealing with the history of their families, classification and structures; natural history; studying, collecting, breeding, attracting and preserving Hymenoptera. Appendices include keys to the families. 214 pages with numerous tables, keys and figures (1986)

£ 11.45

Members price £ 8.60

Revised Flight Tables for the Hymenoptera

Revised flight tables for the Hymenoptera giving, wherever possible, times, location, flower visits and some indication of distribution and abundance. 24 pages (1988)

£ 3.10

Members price £ 2.35

A Coleopterist's Handbook

Edited by J.Cooter & M.V.L.Barclay The *Coleopterist's Handbook*, is now available as a fully revised and expanded fourth edition. Nomenclature has been brought inline with current use, collecting/curatorial methods reflect best practice and plant/beetle and beetle/plant lists are included together. Recent additions to the British fauna, modern and traditional techniques are included. All advice and comment given in the book is based upon collective years of practical experience of both curatorial methods and field craft; beetle family chapters have each been written by an internationally recognised authority. 496 pages including 32 colour plates.

£ 54.00

Members price £ 39.00

Host plants of British Beetles: A List of Recorded Associations

A list of a wide range of plants, in alphabetical order, together with the beetle species that have been recorded as being associated with them. 24 pages (1992)

£ 3.10

Members price £ 2.35

A Silkmoth Rearer's Handbook by B.O.C. Gardiner

SPECIAL OFFER PRICE £ 7.70

No further discounted price available

A Dipterist's Handbook by A.E. Stubbs, P.J. Chandler and others

A practical handbook for both the beginner and the initiated on collecting, breeding and studying the two-winged flies. Describes equipment, trapping, preservation, habitat, plant and animal associations and behaviour. Includes a detailed chapter on larval stages with an illustrated key to families. An essential book for the keen Dipterist. 260 pages with drawings of larvae and equipment (1978, reprinted 1996)

£ 14.20

Members price £ 10.60

Practical Hints for Collecting and Studying the Microlepidoptera

by P.A. Sokoloff. A practical manual for those interested in the smaller moths, describing techniques for collecting adult moths, collecting immature stages, breeding, killing, setting and mounting. A list of useful books and journals as well as details of societies and suppliers is included. 40 pages, 11 figures (1980)

£ 4.20

Members price £ 3.15

Rearing and Studying Stick and Leaf-Insects by P. D. Brock

Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003)

£ 11.20

Members price £ 8.20

The Study of Stoneflies, Mayflies and Caddisflies by T.T. Macan

A comprehensive guide to collecting and studying the biology and ecology of these aquatic insects. 44 pages, 10 figures and bibliography (1982)

£ 4.20

Members price £ 3.15

Breeding the British Butterflies by P.W. Cribb

A practical handbook covering all aspects of butterfly breeding, including general techniques, equipment and hints on how to breed each of the British species. 60 pages, 6 figures, 5 plates, Revised (2001)

£ 5.20

Members price £ 3.85

Practical Hints for the Field Lepidopterist by J.W. Tutt

Written at the turn of the century, this book has been reprinted because of its scarcity and value to students of Lepidoptera. It gives a complete month by month guide to which species and stages of macros and micros to look for and how to find them. Also contains a biological account of the early stages and how to keep, rear, photograph and describe them. 422 pages. Hardback. (Reprinted 1994).

£ 24.00

Members price £ 18.30

An index to the modern names for use with J.W. Tutt's Practical Hints for the Field Lepidopterist by B.O.C. Gardiner

A valuable cross-reference guide between the scientific and English names used in the early 1900s and the present time.

£ 4.70

Members price £ 3.50

A Guide to Moth traps and their use by R. Fry and P. Waring

The first sections deal with the measurement and properties of light leading into the types of lamp available and the electrical circuits needed to operate them. The next sections give details of the construction of the most popular traps used in the UK. The last half deals with the practical use of traps in the field including where and when to trap, limitations of traps and their relative performance. 68 pages, 21 figures, 15 plates (1996)

£ 6.85

Members price £ 5.05

The Amazing World of Stick and Leaf Insects by Paul D. Brock

A superb, comprehensive guide, for all those intrigued by these groups of insects. Topics covered include structure, fascinating facts, life history and development, defence behaviour, enemies, collecting, breeding (including trouble shooting), preserving, taxonomic studies, important collections in Museums etc. around the world and elaborate stories, beliefs and poems. Also outlines the major known species around the world on a regional basis. A section on Fossils is included. Includes a comprehensive glossary of the technical terms used in the description and classification of stick and leaf-insects. Hardback A5, 184 pages, 46 figures, 26 black and white plates and 40 pages of colour plates (containing 83 photographs and 4 drawings/paintings of insects and their habitats). (1999)

£ 18.90

Members price £ 14.10

Rearing Parasitic Hymenoptera by M. Shaw

This booklet provides information on the parasitic Hymenoptera to enable successful studies to be made of this little understood group of the British insect fauna. Details are given on the general biology of parasitic wasps, rearing principles, efficient rearing practices and detailed methods of dealing with adult wasps. 52 pages, 4 colour plates (New edition - 2001)

£ 5.70

Members price £ 4.20

Larval Foodplants of the British Butterflies by Peter May

A comprehensive compilation of the known larval foodplants of our native and immigrant butterflies. Also including "How to Encourage Butterflies to Live in Your Garden" by the late Peter Cribb 62 pages. (2003)

£ 7.40

Members price £ 5.45

The larger water beetles of the British Isles by Peter Sutton

For those who love the spectacular larger water beetles of the British Isles, this is the publication that you have been waiting for! It is the only modern publication with colour illustrations of all of our aquatic coleopteran megafauna and it provides the most up-to-date distribution maps revealing their current distributions. Jam-packed with fascinating details of their life-histories, this book covers 11 species including the 6 native 'Great Diving Beetles' and the 'Silver Water Beetles'. It is also copiously illustrated with text figures and has much additional information including details of observed climate-induced range changes and the conservation measures required to ensure their continued survival.

£ 11.90

Members price £ 8.90

Glossary for the Young Lepidopterist

6 pages, 2 figures. (1951)

£ 1.05

Members price £ 0.90

A Label List of European Butterflies

20 pages. (Revised 1981)

£ 2.35

Members price £ 1.85

Some British Moths Reviewed

Aid to the identification of some of the more difficult species. Reprinted from the *Amateur Entomologist* Vol. 5 (1941) and a *Guide to the Critical Species of Lepidoptera*, reprinted from *Entomologists' Gazette* 1969-72. 64 pages, 6 black and white plates, numerous figures (1985)

£ 4.45

Members price £ 3.35

Butterflies of Cyprus 1998 (Records of a years sightings) by Eddie John

Observations of the 44 species of butterfly found on the island in 1998 including notes on each species and distribution maps. 46 pages (2000)

£ 4.30

Members price £ 3.25

Collecting Het.Bugs (Hemiptera: Heteroptera)

12 pages (including 2 plates). (1946)

£ 1.20

Members price £ 1.00

Collecting Clearwings

12 pages (including 2 plates), 4 figures. (1946)

£ 1.10

Members price £ 1.00

Collecting Lacewings

9 pages, 8 figures, 5 plates. (2nd edition 1976)

£ 2.25

Members price £ 1.75

An Amateur's Guide to the Study of the Genitalia of Lepidoptera

16 pages, 15 figures. (1973)

£ 3.10

Members price £ 2.35

Rearing the Hymenoptera Parasitica

16 pages, 1 plate, 10 figures. (1974)

£ 2.55

Members price £ 2.00

Rearing Crickets in the Classroom

12 pages, 2 plates. (1986) (Reprinted 1993)

£ 2.10

Members price £ 1.65

Guidelines for Entomological Site Surveys

Published on behalf of the JCCBI. 7 pages (2000) (Reprinted 2003) Members price £ 2.35

The Journal of the Entomological Exchange and Correspondence Club 1935-1936

An AES Jubilee Publication. Fascinating reprint of the very first volume of the AES journal. 100 pages.

£ 4.20

Members price £ 3.35



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- 1045 *A. notana* (Hübn.) — Commins Coch SH845028 (47) 6.ix.2003 — PRW
- 1048 *A. variegana* ([D. & S.]) — Killotteran SS555115 (H6) 27.viii.2008 — KGMB
- 1051 *A. logiana* (Cl.) — Holme Fen TL197893 (31) 1.vii.2008 — BD
- 1052 *A. umbrana* (Hübn.) — West Bexington SY5387 (9) 26.vii.2008, first VC record since c.1960 — PHS
- 1054 *A. cristana* ([D. & S.]) — Llechryd (Llys y Wern) SN208447 (46) 18.x.2008 — W. James per ADL; Commins Coch SH845028 (47) 19.iii.2005 — PRW
- 1055 *A. hyemana* (Haw.) — Commins Coch SH845028 (47) 5.xi.2003 — PRW
- 1061 *A. literana* (Linn.) — Glasbury on Wye SO181391 (43) 30.iv.2005 — PJC & VFC; Bealkelly Wood R670827 (H9) 3.iv.2008 — KGMB
- 1013 *Olindia schumacherana* (Hübn.) — Commins Coch SH845028 (47) 6.vii.2004 — PRW
- 1069 *Celypha aurofasciana* (Haw.) — Stubhampton Bottom ST8915 (9) 10.vi.2008, first VC record since c.1960 — P.A. Davey per PHS
- 1075 *Olethreutes micana* ([D. & S.]) (= *olivana* Treits.) — Egno Moss NO3553 (90) 22.vi.2008 — KPB
- 1082 *Hedya pruniana* (Hübn.) — Peatlands Park H896605 (H37) 1.vi.2008 — KGMB
- 1093 *Apotomis betuletana* (Haw.) — Lettermaghera South L959981 (H27) 26.vii.2008 — KGMB
- 1096 *A. sauciana* (Fröl.) — Mynydd Ffoesidoes SO191652 (43) 22.vii.2008, genitalia det. — PJC & VFC
- 1102 *Endothenia nigricostana* (Haw.) — Old Weston TL099774 (31) 17.vi.2008 — K. Royles per BD
- 1106 *Lobesia reliquana* (Hübn.) — Hatfield Moors SE7106 (63) 7.vi.2008 — HEB
- 1108 *L. abscisana* (Doublid.) — Llangynidr SO1520 (42) 2.viii.2008 — JRL; Glasbury on Wye SO181391 (43) 2.v.2007, genitalia det. — PJC & VFC; Framwellgate Moor NZ264446 (66) 23.vii.2008 — T. Barker per AJW; Tynemouth NZ364705 & Whitley Bay NZ350731 (67) 23.vii.2008 — TJT & K.W. Regan; Stamullen O146662 (H22) 27.vii.2008 — EO'D, **New to Ireland**
- 1110 *Bactra furfurana* (Haw.) — Glasbury on Wye SO181391 (43) 6.ix.2007, genitalia det. — PJC & VFC
- 1112 *B. robustana* (Christoph) — Alton SU708388 (12) 27.viii.2008, genitalia det. BG — D.B. Owen per MJW
- 1113 *Eudemis profundana* ([D. & S.]) — Elan Valley SN936657 (43) 6.ix.2008 — O. Sargent per PJC Commins Coch SH845028 (47) 1.viii.2004 — PRW; Hutton Conyers SE3273 (65) 31.vii.2008, det. HEB — CHF & VFC;
- 1115 *Ancylis achatana* ([D. & S.]) — Hartburn, Stockton-on-Tees NZ424177 (66) 10.vii.2007 — J.R. Duffie per AJW
- 1117 *A. unguicella* (Linn.) — Cefndyrys SO039529 (43) 22.vi.2007, det. NRL — PJC & VFC; Cullamore H585473 (H32) 7.vi.2008 — KGMB
- 1119a *A. diminutana* (Haw.) — Holy Island NU095432 (68) 7.vi.2008 — TJT
- 1126 *A. badiana* ([D. & S.]) — Downderry SX316540 (2) 9.vii.2008, first VC record since VCH — S. Madge per LACT
- 1132 *Epinotia subocellana* (Don.) — Drumsheen G352187 (H26) 24.v.2008 — KGMB
- 1133 *E. bilunana* (Haw.) — Nadroedd SH960253 (47) 14.vii.2002 — ANG & JEG per PRW
- 1134 *E. ramella* (Linn.) — Commins Coch SH845028 (47) 3.ix.2003 — PRW

- 1136 *E. immundana* (F. v. R.) — Commins Coch SH845028 (47) 1.v.2005 — PRW
- 1138 *E. nisella* (Cl.) — Tramore S578014 (H6) 8.viii.2006 — TB
- 1142 *E. tedella* (Cl.) — Old Glanmire Bridge W713785 (H5) 30.viii.2008 — KGMB
- 1143 *E. fraternana* (Haw.) — Halsdon (4) 26.v.2006 — B.P. Henwood *per* RJH
- 1144 *E. signatana* (Dougl.) — NT Sherborne Estate SP1715 (33) 20.vi.2008, genitalia det. — G.H.J. Meredith *per* RGG; Tramore S578014 (H6) 10.vii.2005 — TB
- 1151 *E. trigonella* (Linn.) — Castleblagh Wood W708979 (H5) 30.viii.2008 — KGMB
- 1154 *E. caprana* (Fabr.) — Commins Coch SH845028 (47) 16.viii.2006 — PRW
- 1155 *E. brunnichana* (Linn.) — Hutton Conyers SE3273 (65) 6.viii.2008, genitalia det. — CHF
- 1157 *Crocidosema plebejana* Zell. — Mornington O1575 (H22) 19.ix.2008 — EO'D
- 1161 *Rhopobota stagnana* ([D. & S.]) — Cnuc Na Croise, Islay (102) 4.vi.2008 — KPB
- 1163 *Zeiraphera ratzeburgiana* (Ratz.) — Ty-rhyg SN0529 (45) 25.vii.2008 — R. Dobbins *per* RE; Tramore S578014 (H6) 21.vii.2006 — TB
- 1168 *Gypsonoma sociana* (Haw.) — Commins Coch SH845028 (47) 28.vii.2005 — PRW
- 1169 *G. dealbana* (Fröl.) — Commins Coch SH845028 (47) 20.vii.2007 — PRW
- 1170 *G. oppressana* (Treits.) — Hutton Conyers SE3273 (65) 27.vii.2008, det. HEB — CHF
- 1176 *Epiblema trimaculana* (Haw.) — Commins Coch SH845028 (47) 2.vii.2004 — PRW
- 1184 *E. scutulana* (D.& S.) — Ffynnon Gynydd Common SO160408 (43) 22.v.2005 — PJC & VFC
- 1184a *E. cirsiana* (Zell.) — Rhos Goch SO189476 (43) 21.v.2008 — PJC & VFC
- 1186 *E. sticticana* (Fabr.) — Coed y Brenin SH730235 (48) 20.vi.2008 — ANG & JEG
- 1193 *Eucosma tripoliana* (Barr.) — Tramore saltmarsh S606006 (H6) 18.viii.2006 — TB, **New to Ireland**
- 1196 *E. metzneriana* (Treits.) — Totland SZ328860 (10) 30.vi.2008, det. D.J.L. Agassiz — SAK-J
- 1205a *Spilonota laricana* (Hein.) — Callowbrack L992987 and Lettermaghera South L959981 (H27) 26.vii.2008 — KGMB
- 1208 *Pseudococcyx posticana* (Zett.) — Coventry SP381789 (38) 10.v.2008, genitalia det. NJS — J.R. Jennings *per* NJS
- 1210 *Rhyacionia buoliana* ([D. & S.]) — Tramore S578014 (H6) 20.vii.2006 — TB
- 1212 *R. pinivorana* (L. & Z.) — Cwm Byddog RWT Reserve SO215448 (43) 10.vi.2007, genitalia det. — PJC & VFC
- 1215 *Thaumatotibia leucotreta* (Meyr.) — Basingstoke (12) larva in orange at ASDA supermarket 5.viii.2008, moth bred — A.H. Dobson *per* MJW
- 1216 *Enarmonia formosana* (Scop.) — Kilkeeran M164726 (H26) 27.vii.2008 — KGMB
- 1219 *Lathronympha strigana* (Fabr.) — Commins Coch SH845028 (47) 14.vi.2004 — PRW
- 1223 *Pammene splendidulana* (Guen.) — Hannabrough Moor SS525026 (4) 3.v.2007 — R. Wolton *per* RJH
- 1225 *P. obscurana* (Steph.) — The Park, Tidenham Chase ST5599 (34) 12.v.2008, genitalia det. — G.H.J. Meredith *per* RGG
- 1228 *P. argyrana* (Hübn.) — Halsdon (4) 26.v.2006 — B.P. Henwood *per* RJH
- 1228a *P. ignorata* Kuzn. — Zeal Monachorum SS719039 (4) 12.vi.2007, genitalia det. RJH — SDB; Alsager SJ819545 (58) 10.vi.2008, genitalia det. — M. Dale *per* SHH

- 1229 *P. albuginana* (Guen.) — Ban-y-gor Wood ST5396 (34) 7.vi.2008, genitalia det. — RGG
- 1233 *P. aurita* (Staud.) — Commins Coch SH845028 (47) 25.vii.2004 — PRW
- 1234 *P. regiana* (Zell.) — Commins Coch SH845028 (47) 22.vi.2004 — PRW
- 1235 *P. trauniana* ([D. & S.]) — Magdalen Hill Down SU507292 (12) 10.v.2008 — MJW
- 1236 *P. fasciana* (Linn.) — Commins Coch SH845028 (47) 8.vii.2004 — PRW
- 1237 *P. germmana* (Hübn.) — Dunsland Park SS409050 (4) one at light 5.v.2007 — R. Wolton *per* RJH; Commins Coch SH845028 (47) 16.vi.2005 — PRW; Coed y Brenin SH737225 (48) 4.vi.2008 — ANG & JEG
- 1238 *P. ochsenheimeriana* (L. & Z.) — Chedington Woods ST4806 (9) 16.v.2008 — B.P. Henwood & PHS
- 1239 *P. rhediella* (Cl.) — Cnwc, Brechfa SN5131 (44) 14.v.2008 — S.D.S. Bosanquet *per* JSB
- 1271 *P. gallicana* (Guen.) — Staple Park Wood ST2417 (5) 19.vii.2008 — JAMcG
- 1272 *P. aurana* (Fabr.) — Commins Coch SH845028 (47) 15.vii.2007 — PRW
- 1242 *Grapholita internana* (Guen.) — The Begwyns SO162441 (43) 21.v.2007 — PJC & VFC
- 1245 *G. janthinana* (Dup.) — Glasbury on Wye SO181391 (43) 27.vii.2007, genitalia det. — PJC & VFC
- 1247 *G. funebrana* (Teits.) — Glasbury on Wye SO181391 (43) 27.vii.2007, genitalia det. — PJC & VFC
- 1249 *G. lobarzewskii* (Nowicki) — Edge Common SO8408 (33) 4.vii.2008, genitalia det. — G.H.J. Meredith *per* RGG; Glasbury on Wye SO181391 (43) 2.vii.2007, genitalia det. — PJC & VFC, **New to Wales**
- 1252 *G. lunulana* ([D. & S.]) — Tramore Burrow S612003 (H6) 1.vi.2006 — TB
- 1257 *Cydia nigricana* (Fabr.) — Penlee Battery NR SX436491 (2) 31.v.2008, first VC record since VCH — LACT; Clonyard NX8755 (73) 26.vii.2006 — J. Mackay *per* KPB; Barry Buddon NO5333 (90) larvae in seedpods of *Vicia cracca* 21.viii.2008, moths bred — KPB; Mornington O1575 (H22) 30.v.2008 — EO'D
- 1259 *C. fagiglandana* (Zell.) — Glasbury on Wye SO181391 (43) 11.viii.2007, genitalia det. — PJC & VFC; Dale SM8005 (45) 8.vii.2008 — DJS; Framwellgate Moor NZ264446 (66) 2.vii.2005 — T. Barker *per* AJW; Raheen Wood R641827 (H9) 24.vii.2008, genitalia det. — KGMB
- 1260 *C. splendana* (Hübn.) — Commins Coch SH845028 (47) 13.vii.2004 — PRW; Inchmarlo NO6796 (91) vii.2008 — C. Holmes *per* MRY
- 1262 *C. amplana* (Hübn.) — Shortheath Common SU775364 (12) 7.viii.2008 — AMD *per* MJW
- 1267 *C. cosmophorana* (Treits.) — New Wavendon Heath SP9233 (24) 14.vi.2008 — M. Harvey *per* MVA
- 1273 *Dichrorampha petiverella* (Linn.) — Brampton Racecourse TL203724 (31) 13.vii.2008, first county record since VCH — I. Dawson *per* BD
- 1274 *D. alpinana* (Treits.) — Glasbury on Wye SO181391 (43) 21.vi.2007, genitalia det. — PJC & VFC; Commins Coch SH845028 (47) 26.vii.2004 — PRW
- 1275 *D. flavidorsana* Knaggs — Fallin NS836919 (86) vii.2008 — B.&H. Dawson *per* JK
- 1277 *D. senectana* Guen. — Gad Cliff SY8879 (9) 25.iv.2008, larval workings on *Leucanthemum vulgare*, adults emerged 5.vi.2008, first VC record since 19th C. — PHS & MSP

- 1278 *D. sequana* (Hübn.) — R. Wye Glasbury SO180395 (43) 10.vi.2007, det. NRL — PJC & VFC
- 1279 *D. acuminatana* (L. & Z.) — Commins Coch SH845028 (47) 19.vi.2007 — PRW; Traethdy, Harlech SH574301 (48) 29.viii.2008, genitalia det. ANG — H. Bantock per ANG
- 1281 *D. simpliciana* (Haw.) — Commins Coch SH845028 (47) 21.vii.2005 — PRW
- 1283 *D. montanana* (Dup.) — Commins Coch SH845028 (47) 11.vi.2008 — PRW
- 1284 *D. vancouverana* McDunnough — Commins Coch SH845028 (47) 17.viii.2007 — PRW
- 1286 *D. sedatana* Busck. — Glasbury on Wye SO178393 (43) 18.v.2008, genitalia det. — PJC & VFC

EPMENIIDAE

- 481 *Epermenia falciformis* (Haw.) — Hannabrough Moor (4) 31.v.2003 — R. Wolton per RJH; Commins Coch SH845028 (47) 6.viii.2006 — PRW; Ellington Banks MoD SE274729 (64) 10.vi.2007 — AJW, J.R. Duffie & J.C. Warwick
- 484 *E. aequidentellus* (Hofm.) — Eathie Mains NH772640 (106) 3.vi.2008 — KGMB, **New to Scotland**, Ent. Gaz. 60: 88; Tramore Burrow S607004 (H6) 16.vii.2006, genitalia det. KGMB — TB, **New to Ireland**

ALUCITIDAE

- 1288 *Alucita hexadactyla* Linn. — Bridge of Allan NS791985 (86) 19.iv.2008 — H. Young per JK; Killavullen W645933 (H5) 27.ix.2008 — KGMB

PYRALIDAE

- 1289 *Euchromius ocellea* (Haw.) — Llanishen ST172822 (41) 11.ii.2008, first county record since 1857 — DJS; St Peters, Guernsey WV257783 (113) 28.i.2008 — PDMC; Tramore S578014 (H6) 9.ii.2008 — TB
- 1294 *Crambus pascuella* (Linn.) — Cullamore H585473 (H32) 7.vi.2008 — KGMB
- 1296 *C. silvella* (Hübn.) — Cury SW67212215 (1) 28.vii.2008 — F. Johns per MT, Atropos 36: 37
- 1298 *C. ericella* (Hübn.) — Meall Gorm, near Invercauld NO1893 (92) 5.vii.2008 — MRY
- 1313 *Catoptria pinella* (Linn.) — Fallin NS836919 (86) 28.vii.2008 — B. & H. Dawson per JK
- 1331 *Acentria ephemerella* (D. & S.) — Glasbury on Wye SO181391 (43) 6.viii.2008 — PJC & VFC; Welshpool SJ220104 (47) 23.vii.2005 — D. Chesmore per PRW; Tramore S578014 (H6) 4.viii.2006 — TB
- 1332 *Scoparia subfusca* Haw. — Tramore S578014 (H6) 20.vii.2006 — TB
- 1333 *S. pyralella* ([D. & S.]) — Mornington O1575 (H22) 6.vi.2008 — EO'D
- 1338 *Dipleurina lacustrata* (Panzer.) — Tramore S578014 (H6) 9.viii.2004, first county record since 1886 — TB
- 1336 *Eudonia pallida* (Curtis) — Glasbury on Wye SO181391 (43) 26.v.2006, genitalia det. NRL — PJC & VFC
- 1342 *E. angustea* (Curtis) — Glasbury on Wye SO181391 (43) 2.ix.2006 — PJC & VFC
- 1348 *Parapoynx stratiotata* (Linn.) — Welshpool SJ220104 (47) 23.vii.2005 — D. Chesmore per PRW; Great Newtown Head X569989 (H6) 12.vii.2007 — TB

- 1356a *Evergestis limbata* (Linn.) — Maenporth SW785295 (1) 12.viii.2008 — JHC; Kingsteignton (3) 15.vii.2004 — B. King *per* RJH; Bishop's Sutton SU614300 (12) 30.vii.2008 — P.G.L. Thompson *per* MJW; Kirby-le-soken TM227221 (19) 25.vi.2006 — PB
- 1358 *E. pallidata* (Hufn.) — Commins Coch SH845028 (47) 1.vii.2004 — PRW; Tramore S578014 (H6) 4.viii.2006, first county record since 1901 — TB
- 1360 *Hellula undalis* (Fabr.) — Tramore S578014 (H6) 24.ix.2006 — TB, **New to Ireland**
- 1365 *Pyrausta despicata* (Scop.) — Mornington O1575 (H22) 9.v.2008 — EO'D
- 1369 *Uresiphita gilvata* (Fabr.) — Easton Hornstocks TF0000 (32) 11.ix.2008 — K. Tailby, M. Hammond & P. Clarke *per* DVM; Tramore S578014 (H6) 18.x.2006 — TB, **New to Ireland**
- 1374a *Sclerocona acutellus* (Eversm.) — Zeal Monachorum SS719039 (4) 17.vi.2007, re-thatching was being carried out in the area — SDB
- 1380 *Phlyctaenia perlucidalis* (Hübn.) — Goonhilly (1) 14.vii.2008 — MT, *Atropos* 36: 37
- 1383 *Psammotis pulveralis* (Hübn.) — Uplyme (3) 8.viii.2004 — O. Woodland *per* RJH
- 1385 *Ebulea crocealis* (Hb.) — Glasbury on Wye SO181391 (43) 13.vii.2005 — PJC & VFC; Commins Coch SH845028 (47) 14.viii.2004 — PRW
- 1386 *Opsibotys fuscalis* ([D. & S.]) — Glenfinglas NN5210 (87) 4.vii.2008 — N.A. Littlewood *per* JK; Mornington O1575 (H22) 30.v.2008 — EO'D
- 1397a *Diplopseustis perieresalis* (Walker) — Bishops Stortford TL4820 (20) 22.viii.2008, det. MRH from genitalia slide by R. Terry — J. Fish & J. Reeves *per* CWP; Billinge SD5202 (59) 23.vii.2008, conf. MRH — C. A. Derbyshire *per* SMP, *Ent. Gaz.* 60: 24
- 1403a *Duponchelia fovealis* (Zell.) — Hendomen SO211982 (47) 8.x.2004 — K. Wesson *per* PRW
- 1405 *Pleuroptya ruralis* (Scop.) — Kilkeeran M164726 (H26) 27.vii.2008 — KGMB
- 1408 *Palpita vitrealis* (Rossi) — Commins Coch SH845028 (47) 26.vi.2006 — PRW
- 1409a *Diaphania perspectalis* Walker — Icklesham (14) 23 & 24.ix.2008 — I. Hunter, *Atropos* 36: 46; Weybridge (17) 4.ix.2008 — A. Mitchell, *Atropos* 36: 17-18. **New to the British Isles**
- 1410 *Agroterta nemoralis* (Scop.) — West Bexington SY5386 (9) 24.vi.2008 — R. Eden *per* PHS
- 1414 *Synaphe punctalis* (Fabr.) — Bushy Park TQ166692 (21) 1.viii.2007 — THF
- 1415 *Orthopygia glaucinalis* (Linn.) — Zeal Monachorum SS719039 (4) 23.vii.2007 — SDB; Commins Coch SH845028 (47) 10.viii.2007 — PRW
- 1417 *Pyralis farinalis* (Linn.) — Glasbury on Wye SO181391 (43) 27.vii.2008 — PJC & VFC
- 1425 *Galleria mellonella* (Linn.) — Elan Valley SN936657 (43) adult in Bee Hive, 6.vii.2008 — O. Sargent *per* PJC & VFC; Coed Lletywalter SH601275 (48) 26.viii.2008 — J. Hicks & H. Bantock *per* ANG
- 1428 *Aphomia sociella* (Linn.) — Fallin NS836919 (86) 12.vii.2008 — B. & H. Dawson *per* JK
- 1433 *Cryptoblabes bistriata* (Haw.) — Commins Coch SH845028 (47) 2.vii.2005 — PRW
- 1435 *Conobathra tumidana* ([D. & S.]) — Teignmouth (3) 20.vii.2005 — R.F. McCormick *per* RJH
- 1438 *Trachycera suavella* (Zinck.) — Kilpaison Marshes SM8901 (45) 19.vii.2008 — RE & R. Dobbins

- 1439 *T. advenella* (Zinck.) — Commins Coch SH845028 (47) 24.vii.2004 — PRW; Kilkeeran M164726 (H26) 27.vii.2008 — KGMB; Lettermaghera South L959981 (H27) 26.vii.2008 — KGMB
- 1442 *Pempelia palumbella* ([D. & S.]) — Stoke Common SU9885 (24) 28.vi.2008 — MVA; near Ty-llwyd SN5706 (44) 28.vi.2008 — I. Morgan per JSB
- 1451 *Pyla fusca* (Haw.) — Glenfinglas NN4812 (87) 3.vii.2008 — N.A. Littlewood per JK
- 1452 *Phycita roborella* ([D. & S.]) — Commins Coch SH845028 (47) 14.vii.2004 — PRW; Tramore S578014 (H6) 4.vii.2007 — TB
- 1454b *Dioryctria sylvestrella* (Ratz.) — Salcey Forest SP8050 (32) 29.viii.2008 — P. Sharpe per DVM; Morkery Wood SK952188 (53) 30.viii.2008, conf. M. Shaffer — RWG
- 1462 *Pempeliella dilutella* ([D. & S.]) — Kilkeeran (south) M163720 (H26) 27.vii.2008 — KGMB
- 1465 *Nephopterix angustella* (Hübn.) — Monkseaton NZ338723 (67) 29.v.2008 — M.S. Hodgson per TJT
- 1470 *Euzophera pinguis* (Haw.) — Roundton Hill SO292946 (47) 7.ix.2007 — PRW & J. Kensall
- 1475 *Ephestia kuehniella* Zell. — Near Collieston NK0130 (93) in house v.2008 — P. Doyle per MRY
- 1481 *Homoeosoma sinuella* (Fabr.) — R. Wye, Glasbury SO180395 (43) 10.vi.2007 — PJC & VFC
- 1483 *Phycitodes binaevella* (Hübn.) — Commins Coch SH845028 (47) 19.vi.2004 — PRW; Kilkeeran M164726 (H26) 27.vii.2008 — KGMB
- 1485 *P. maritima* (Tengst.) — on either side of the A9 north of Dornoch Firth Bridge NH7487 (107) larvae and empty spinnings amongst *Senecio jacobaea* 31.viii.2008 — RJH

PTEROPHORIDAE

- 1494 *Capperia britanniodactyla* (Gregs.) — nr Llyn Celyn SH871406 (48) 30.vi.2008 — ANG & JEG
- 1497 *Amblyptilia acanthadactyla* (Hübn.) — Commins Coch SH845028 (47) 18.iii.2005 — PRW
- 1498 *A. punctidactyla* (Haw.) — Ballacriy, Colby SC232706 (71) 6.vii.2008 — ISS; Cork City W667713 (H4) 29.ix.2008 — KGMB
- 1503 *Platyptilia ochrodactyla* (D. & S.) — Glasbury Cutting BWT Reserve SO183393 (43) 12.vii.2006 — PJC & VFC
- 1504 *P. pallidactyla* (Haw.) — Commins Coch SH845028 (47) 6.vii.2007 — PRW
- 1507 *Stenoptilia zophodactylus* (Dup.) — Braunton Burrows (4) 23.viii.2008 — SDB & RJH; Heysham SD4059 (60) 17.vii.2008, genitalia det. SMP — R. Neville per SMP
- 1508d *S. inopinata* Bigot & Picard — Plympton SX542571 (3) 21.vii.1990, one at light, genitalia det. E. Arenberger — RJH [one of 6 British specimens recently determined by Arenberger as this species. It was dissected several years ago (a female) which was clearly not the same as *S. bipunctidactyla* but because of the confusion with species in this genus, it had to wait for Arenberger to name it and his determination was not known until 2008]
- 1509 *S. pterodactyla* (Linn.) — Mornington O1575 (H22) 8.vii.2008 — EO'D
- 1510 *Merrifieldia leucodactyla* ([D. & S.]) — Tynemouth NZ364705 (67) 8.viii.2008 — TJT

- 1513 *Pterophorus pentadactyla* (Linn.) — Killavullen W645993 (**H5**) 7.vii.2008 — KGMB
- 1517 *Adaina microdactyla* (Hübn.) — Bushy Park TQ157699 (**21**) 4.viii.2006 — THF
- 1518 *Ovendenia lienigianus* (Zell.) — Tynemouth NZ364705 (**67**) 25.vii.2008 — TJT
- 1519 *Euleioptilus carphodactyla* (Hübn.) — Writtle College TL6606 (**19**) in RIS trap 26.viii.2008, genitalia det. — BG

Correction

To the 2007 Review:

- 776 *Teleiopsis diffinis* (Haw.) — the date should read: 26.v.2007
- 1108 *Lobesia abscisana* (Doublid.) — this species was recorded as 'New to Scotland' in error in 2008. The species was previously recorded from Shetland in 1996.
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***Ypsolopha sylvella* (L.) (Lep.: Yponomeutidae): A first for Norfolk since 1884**

A total of six 125-watt MV lights were run at East Winch Common, West Norfolk (VC 28) on 8 September 2009. The site consists of approximately 31 acres of heathland and is bordered by birch *Betula* and sallow *Salix* with good stands of old mature oaks *Quercus* along its southern periphery. It is a Site of Special Scientific Interest (SSSI) and is managed by Norfolk Wildlife Trust. The target moths were not seen on the night, in fact with only 49 species the catch was fairly poor considering the overcast, calm weather and a temperature pushing 14°C at midnight.

On the last trap round, one of the traps next to the oak trees produced a brightly coloured *Ypsolopha sylvella*. On consulting Jim Wheeler the Norfolk county recorder, I discovered that no records of this species are known from Norfolk since Charles Barrett recorded one at Carbrook (VC 28) in 1884.— JON CLIFTON, Kestrel Cottage, Station Road, Hindolveston, Norfolk NR20 5DE (E-mail: jon.clifton@btinternet.com).

Important records from the Rothamsted Insect Survey light-trap at Monymusk, South Aberdeenshire, VC92

Having previously operated a trap at Port Elphinstone (site 537: O. S. grid reference NJ 773201) for just over a year, Jon and Marion Bailey then went on to operate the Monymusk light-trap (site 551: NJ 669192) from 13 November 1993 until trapping ceased at the end of 2008. Their hard work over the last 15 years has not only contributed greatly to local knowledge but, as part of Rothamsted's national light-trap network, has also provided significant input to our knowledge of moth populations across the UK.

Ancient woodland is a very scarce commodity in this part of the UK. Unsurprisingly, the Monymusk trap, being sited within such a habitat known locally as the Oak Brae, frequently recorded oak-feeding species seen at very few localities in the area. For example, reasonable numbers of Merveille du Jour *Dichonia aprilina* L. and Brindled Green *Dryobotodes eremita* Fabr. were recorded each year; a single Oak Nycteoline *Nycteola revayana* Scop. was caught in 2007 and it is one of the few places where the rare tortricid *Acleris literana* (L.) is found in the area. The trap was also of great importance in monitoring several species of great local, if not national importance and these are detailed below.

Caloptilia leucapennella (Steph.), Gracillariidae, is a nationally uncommon species that is very rare in south-east England but more frequent, although still local, westwards into Wales and Ireland (Heath & Emmet, 1985. *The Moths & Butterflies of Great Britain & Ireland* 2. Harley Books). In Scotland it has been recorded at very few sites and was caught in nine out of the 15 years that the Monymusk trap operated; most occurred in early Spring with the most recent record being on 1 April 2008. The only other known locality in north-east Scotland is Dinnet Oakwood National Nature Reserve (O. S. grid reference NO 4698), from where it has been bred by Mark Young. There are two colour forms: the typical form is a pale yellow-white and the other, f. *aurantiella* Peyer., is reddish. Between these is a full range of intermediate forms (Heath & Emmet, *op. cit.*) – all of those caught at Monymusk were very pale green.

Pseudatemelia josephinae (Toll), Oecophoridae, has an unusual distribution in the UK, occurring locally in oak woodlands in southern England and Wales and the Midlands. There is then a gap in distribution before it is again found in northern England and scattered localities in Scotland (Emmet & Langmaid, 2002. *The Moths & Butterflies of Great Britain & Ireland* 4(1)). Recorded from only one other site in VC 92 (Dinnet Oakwood NNR, in 1989), it was trapped in most years at Monymusk with usually just one specimen per year. The only other records in the north-east come from Inchmarlo, Kincardineshire (NO 670969, VC 91), where Cedric Holmes has found it for a number of years.

Olindia schumacherana (Fab.), Tortricidae, is found most commonly in the south of England (Bradley, Tremewan & Smith, 1973. *British Tortricoid Moths*. Ray Society), but is local and rare in Scotland. It was recorded twice from the

Monymusk trap, on 8 July 2005 and 5 July 2006. It is known from only one other locality in VC 92, at Kirkhill Forest (NJ 8410), where it was caught on 16 July 1986. In VC 91, it was recorded at Inchmarlo on 3 July 1988 and in VC 93 (North Aberdeenshire), it was found at Fyvie (NJ 7938) in July 1977.

Catoptria permutterella (H.-S.), Crambidae, is a moth that is found only in Scotland, where it is a speciality of the north-east. It occurred in modest numbers in the trap each year as it is widespread in the area, especially along the Dee and Don valleys, from Aberdeen to Braemar and Strathdon.

Catoptria falsella (D. & S.) is a local and uncommon species found from Aberdeen southwards, and most frequently in southern England (Goater, 1986. *British Pyralid Moths*. Harley Books). In north-east Scotland it was formerly a coastal species which began to move inland from the Kincardineshire coast in 1999. In that year the first specimens were discovered in a garden in Aberdeen, where it has now become common. Movement inland has been slow, with the first individual appearing at Monymusk on 1 August 2004 and then again in 2007 and 2008. These remain the furthest inland records in this part of the country.

The Pale November Moth *Epirrita christyi* Allen, Geometridae, is a widespread and locally common species in England, Wales and southern Scotland (Skinner, 2009. *Colour Identification Guide to Moths of the British Isles*. Apollo), but it is a recent arrival in north-east Scotland, where it was first found in Rothamsted's Glen Saugh trap (site 554: NO 671782, VC 91) in 1995. Early records for VC 92 came from the Rothamsted trap at Mar Lodge near Braemar (site 573: NO 100901) which started operating in 1999. From here it appears to be spreading slowly and in 2006 was found at Aboyne on Deeside (NO 5298) and a singleton caught at Monymusk on 24 September 2008 provided a third locality within VC 92.

The Dingy Shell *Euchoeeca nebulata* Scop. is widespread and common across much of England and Wales, but it is very uncommon in Scotland. In VC 93 it was recorded from Gight Woods near Methlick (NJ 8239) in 1993, and Mark Young has found larvae in Den Wood near Oldmeldrum (NJ 8030). Apart from a single worn specimen taken near Dyce (NJ 8514) in 1985, and one at Cambus o'May (NO 4297) in 2004, the only other VC 92 site is Monymusk, where singletons were caught in 1997, 1999, 2003 and 2006.

The Yellow-barred Brindle *Acasis viretata* Hb. is another recent addition to the north-east Scotland list. It is widespread in southern England, Wales and Ireland, but very local in north-west England and western Scotland (Skinner, *op. cit.*). The first for north-east Scotland was recorded in 2003 from Inchmarlo by Cedric Holmes and the only VC 93 specimen was caught near Insch (NJ 5627) by the late Arthur Ewing. In 2004 it was recorded at three localities in VC 92: by Helen Rowe near Inverurie (NJ 687117) on 6 May, at Bucksburn (NJ 8810) on 14 May and at Monymusk, with one on 22 May, from where it has been caught once more, in 2006. Whether it is now a scarce resident in north-east Scotland or is still a migrant is debatable; it is a species to watch.

The Latticed Heath *Chiasmia clathrata* L. is common and well distributed in England, Wales and southern Scotland, including several of the Inner Hebrides. (Skinner, *loc. cit.*). In north-east Scotland it was formerly only found on the coast at St. Cyrus (NO 7463) in VC 91. However, the Monymusk trap was instrumental in tracking the species' movement inland and northwards, recording the first specimen for VC 92 on 14 June 2003 and subsequently catching singletons in 2006, 2007 and 2008. *C. clathrata* has now been found at four other localities in South Aberdeenshire, and in North Aberdeenshire and Banffshire.

The Swallow-tailed Moth *Ourapteryx sambucaria* L. is well distributed and fairly frequent throughout most of England and Wales, and into the lowlands of southern Scotland (Waring, P., Townsend, M. & Lewington, R. 2003. *Field Guide to the Moths of Great Britain & Ireland*. British Wildlife Publishing). It was recorded in north-east Scotland for the first time in 1998, where it was discovered at Inchmarlo by Cedric Holmes. The species has since spread rapidly, being recorded from VC 92 in 2004 from five widely separated localities, including one at Monymusk on 28 July (from where it was again recorded in 2008). By 2006 it had spread into North Aberdeenshire.

The Satin Beauty *Deileptenia ribeata* Clerck has its stronghold in the southern half England and much of Wales, elsewhere occurring locally into southern Scotland (Skinner, *op. cit.*). Its colonisation of north-east Scotland has been quite remarkable – first recorded in VC 91 by Cedric Holmes at Inchmarlo on 1 August 1999; the first V C92 specimen was taken just two days later at the Monymusk trap. A second was then recorded on 10 September 1999 and since then the numbers recorded at Monymusk increased steadily, with a count of 168 in the final year of operation.

The Dotted Carpet *Alcis jubata* Thunb. has a predominantly western and northern distribution, occurring commonly in south-west England, western Wales and the west coast of Scotland (Waring et al; *op. cit.*). First recorded in north-east Scotland as a single specimen in Dinnet Oakwood NNR by Alison Duncan on 10 August 1986, it was the commonest moth at the site by July 1990. Since the Monymusk trap started, it has been among the most numerous moths every year – for example, in 2003 the only more frequent species were Mottled Umber *Erannis defolalaria* Clerk and July Highflier *Hydriomena furcata* Thunb.

The Least Black Arches *Nola confusalis* H.-S. is alone among the six species of Nolidae recorded in Britain in having established populations in Scotland, where it occurs mainly in the west and is very local. Elsewhere it is quite well distributed in southern England and Wales, becoming more local further north (Waring et al; *op. cit.*). It is a recent arrival in VC 92, where it probably originated from the west via Banffshire where Roy Leverton found a specimen at Craggan on 25 May 2001, and subsequently recorded two specimens from Ordiqhull (NJ 5755) in 2003. The first records for VC 92 came as singletons in the Monymusk trap on 26 April and 17 May 2003. Subsequently the species was recorded

annually and numbers increased steadily, with 50 recorded in 2008. It has yet to be found elsewhere in Aberdeenshire or in Kincardineshire.

The Twin-spotted Quaker *Orthosia munda* D. & S., Noctuidae, is a well distributed and locally common species, found throughout much of England and Wales but becomes more local in southern and western Scotland, where it is also found on the Inner Hebrides (Skinner, *op. cit.*). Apart from a single 19th Century record at 'Hill of Nigg' (Reid. List of the Lepidoptera of Aberdeenshire and Kincardineshire. *British Naturalist.* 1891-1893) the first north-east Scotland records for over a century both came from the Monymusk trap on 1 and 3 April 2008.

The Slender Brindle *Apamea scolopacina* Esper first appeared in the Monymusk trap on 9 August 2005 and was presumed to be a migrant. However, 12 were trapped during 2007 and it is now considered to be an established resident, although no other VC 92 sites are known. Elsewhere it is locally widespread across much of England and Wales, ranging northwards into Yorkshire, Cumbria, and Dumfries and Galloway (Skinner, *op. cit.*).

The Straw Dot *Rivula sericealis* Scop. is widespread and common in southern Britain, becoming local and predominantly western in northern England and Scotland, including the Inner Hebrides (Waring et al, *op. cit.*). Two simultaneous VC 93 records in 2004 suggested a small migration, as the species is well known to migrate. Further 2004 records, from the Rothamsted Glen Saugh trap on 29 July and 8 August, constituted the first and second records for VC 91, and another was caught here in 2006. These, and a singleton at Monymusk in 2007, may also have been migrants, but the species is likely to become resident in the north-east very soon.

Many thanks to Jon and Marion Bailey for operating the Monymusk trap for so many years, their input to the Rothamsted Light-trap Network will be sorely missed. Rothamsted would also like to thank Bob Palmer for his hard work identifying the Monymusk catches for so many years.— PHILIP J. L. GOULD. Co-ordinator of the Rothamsted Insect Survey Light-trap Network, Plant & Invertebrate Ecology Department, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ (E-mail: phil.gould@bbsrc.ac.uk) and ROBERT M. PALMER, 'White Gables', 10 Fox Court, Storrington, Pulborough, West Sussex RH20 4JL (E-mail: palmebob@gmail.com).

DISTRIBUTION OF THE SCALY CRICKET *PSEUDOMOGOPLISTES VICENTAE GOROCHOV* (ORTH: GRYLLIDAE) IN RELATION TO PUBLIC ACCESS AT CHESIL BEACH IN DORSET

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Abstract

Evidence suggests that *Pseudomogoplistes vicentae* Gorochov (Orthoptera: Gryllidae), the Scaly Cricket, may benefit from increased numbers of visitors at Chesil Beach in Dorset. Populations of this cricket appear to be much larger at the eastern end of Chesil Beach where visitor pressure is high, but in restricted public access sections of the shingle bank numbers of crickets captured in pitfall traps were lower. It is likely that this detritus feeding insect benefits from public access due to large amounts of litter to scavenge on. Its nocturnal foraging habit also makes it less likely to suffer from trampling or physical disturbance by the public.

Keywords: *Pseudomogoplistes vicentae*, Chesil Beach, Orthoptera, Visitor pressure

Introduction

A recent consultation on proposals to improve access to the English coast (DEFRA 2007) has advocated '*a coastal environment where the rights to walk along the length of the English coast lie within a wildlife and landscape corridor that offers enjoyment*'. The present author suggested that improved coastal access could lead to damaging effects on coastal insects, particularly orthopterans such as Scaly Cricket *Pseudomogoplistes vicentae* Gorochov (Orthoptera: Gryllidae), in a talk at the Royal Entomological Society's annual meeting in 2008 at the University of Plymouth (Gardiner, 2008). Peter Sutton (National Recorder for Orthoptera) also suggested that public disturbance could be harmful to this cricket which is listed as Endangered in the British Red Data Book for Insects (Sutton, 1999). Studies have been conducted on the Scaly Cricket at Chesil Beach in Dorset, it is the aim of this paper to review these highlighting how the cricket is distributed along the shingle bank and to discuss this in relation to visitor access.

The Scaly Cricket at Chesil Beach

In Britain, the Scaly Cricket is only known from three areas, including Chesil Beach, the 25 km long shingle ridge protecting the Fleet Lagoon in Dorset. It was originally thought to have been an accidental introduction to the bank from which it was first recorded in the UK in 1949 (Sutton, 1999). However, subsequent finds (e.g. in Devon) prove that it is probably a native insect (Haes & Harding, 1997). The cricket lives by day under stones and shingle on Chesil Beach, and forages at night on detritus in the strandline (Sutton, 1999). Its apparent preference for nocturnal foraging suggests that it largely escapes direct damage or death through

excessive trampling of the shingle on the bank by daytime walkers. Numbers of visitors to Chesil Beach at Ferrybridge are high (c. 100,000 visitors a year), but the population on the bank is relatively large (up to 1000 crickets were recorded in 1996 at Ferrybridge according to the National Biodiversity Network (NBN) Gateway).

A study by Peter Kirby in 1994 involving extensive pitfall trapping at five locations on the bank shows that Scaly Crickets are absent from the restricted access western end of the beach at Abbotsbury and most abundant in the heavily used Ferrybridge area (Table 1) which receives over 100,000 visits/year and has a popular visitor centre. Analysis of the data in Table 1 using Spearman's Rank Correlation indicates a significant negative relationship ($r_s = -0.9$, $P < 0.05$) between distance westwards from the Ferrybridge trapping locations and the abundance of Scaly Crickets. This suggests that the cricket is able to build up large populations in areas of high public usage and it may be one of the few rare invertebrates at Chesil Beach to benefit from increased visitor access brought about by the Marine Bill. The distribution of the cricket may also be influenced by pebble size, the large pebbles at Ferrybridge may allow crickets to penetrate the shingle through the gaps between stones, the smaller pea-sized pebbles at Abbotsbury are probably too tightly packed together to allow access (Kirby, pers. comm.).

Table 1: Mean numbers of Scaly Crickets *Pseudomogoplistes vicentae* captured per week per trap at five locations at varying distances to the west of the heavily visited eastern end of Chesil Beach at Ferrybridge (data from Kirby, 1995).

Trapping location	Location name	Public access arrangements	Distance west from Ferrybridge(km)	Mean no. crickets
SY 670750	Ferrybridge	Access all year*	0.0	101.0
SY 657764	Wyke Regis	Access all year*	1.5	6.0
SY 630789	Moonfleet	Restricted access**	5.2	14.0
SY 603812	Langton Herring	Restricted access**	8.2	0.2
SY 569839	Abbotsbury	Restricted access**	12.4	0.0

* no public access to Little Tern *Sternula albifrons* area

** no public access to fleet (landward facing) side of the bank, no access 1 April-31 August due to bird nesting on seaward side of bank

Scaly Crickets have been found in relatively large numbers in discarded plastic cartons (90 found by Timmins 1994a, b) suggesting that litter on the strandline may be favourable for this insect. Any disturbance to the strandline by walkers could therefore be detrimental, however, public access is a double edged sword as large numbers of Scaly Crickets were found under stones used during footpath improvements (Sutton, 1999). In a recent BAE Systems litter pick, an astonishing 50 bags of rubbish were collected from Chesil and Hamm Beaches comprising

mainly plastic rubbish but also faeces and sanitary items (Moxom, 2007)! This rubbish may provide foraging opportunities for Scaly Crickets, particularly as Adrian Colston (Devon County Recorder for Orthoptera) was able to capture a Scaly Cricket in a baited pitfall trap using cat biscuits, apple and a piece of Cornish pasty as bait. Increased visitor numbers as a result of the coastal access provision in the Marine Bill may bring enhanced opportunities for scavenging amongst a huge amount of litter. Climate change may bring warmer and drier summers, amplifying the number of tourists to Chesil Beach (Coombes *et al.* 2008).

Voisin (1986) suggested that the abundance and diversity of Orthoptera declines even before trampling has had any impact on the vegetation structure, which indicates that high numbers of pedestrians may influence crickets through their physical presence leading to excessive amounts of jumping and escape behaviour (orthopterans mainly jump upon disturbance). Excessive escape movements will lead to high energetic costs and vacation of the habitat by Scaly Crickets which may look for more undisturbed locations. However, as the Scaly Cricket is a nocturnal forager, the impact of disturbance is probably limited to fishermen and night-time visitors. Peter Kirby suggests that Scaly Crickets are surface-active quite soon after dark, and seem rather sensitive to nocturnal disturbance. He indicates that they disappear immediately if a bright light is shone at them, and are almost impossible to creep up on over crunchy shingle. In two hours of very quiet and careful observation with a weak light he managed to catch a fleeting glimpse of just two crickets as they disappeared from view.

Scaly Crickets are mainly distributed on the seaward side of the bank which is very sparsely vegetated (in most places there is no stable plant cover) (Kirby, 1995), which suggests that they will be unharmed by the likely destruction of plant cover on the landward side of the beach caused by the wear and tear of trampling feet (Liddle, 1997). The landward side of the bank may also be more readily accessed by visitors and therefore receive greater trampling pressure.

The future: improved coastal access through the Marine Bill

Objections have been raised by the Chesil Beach and Fleet Lagoon Reserve Team to the proposed coastal access corridor due to concerns over the damage that may occur to the bank from increased numbers of visitors and detrimental activities associated with them (Moxom 2007). A significant problem if the Marine Bill becomes law may be the usage of such terms as 'right to roam' in the media, as was the case with the open access provisions in the Countryside and Rights of Way Act (2000). This will almost certainly lead to the public perception that all coastal land has access rights across it (as some walkers assume that all farmland has access rights due to the misleading terminology used after the CROW Act became law). This may lead to severe damage to coastal vegetation by walkers straying from the corridor in the mistaken belief that they have the right to access all areas. The corridor needs to be clearly marked on the ground, and if necessary

physical measures (e.g. fencing) should be taken to dissuade the public from accessing sensitive habitats. However, the Scaly Cricket may benefit from increased public usage of the beach due to enhanced foraging opportunities from a larger amount of litter and the fact that they may be able to escape daytime trampling and disturbance due to their nocturnal foraging habits.

A 100 m × 50 m enclosure of electrified flexi-netting was erected to protect Little Terns *Sternula albifrons* from fox predation in 2006 (Moxom 2006). The author suggests that it would be interesting to use enclosures to ascertain how human disturbance affects the Scaly Cricket population at Chesil Beach. Experimental data is urgently needed to determine if the Scaly Cricket needs protection from visitor pressure at Chesil Beach, in light of the proposed creation of the coastal access corridor around the entire English coast now that the Marine & Coastal Access Bill has finally received Royal Assent.

Acknowledgements

Thanks are due to Dr Peter Kirby who supplied the data used in Table 1 and also provided many helpful comments and suggestions on this paper. Thanks should be extended to my wife, Michelle, who provided accompaniment and help with fieldwork on trips to Dorset.

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Hoary Footman *Eilema caniola* (Hb.) (Lep.: Arctiidae) in south-east Berkshire

Eilema caniola has recently been observed to have spread into central southern England. These notes cover all individual records of its occurrence in Berkshire (VC 22) up to the end of 2008, together with a glance at records from adjoining counties.

Writing in 1869, Newman was forced to include *E. caniola* in the supplement to his standard work *The Illustrated Natural History of British Butterflies & Moths*. He reported that it was first recorded from the Dublin area of Eire and from Torquay in Devon. South (1907. *Moths of the British Isles*. Series 1. Warne) reported that its first recorded capture was by C. G. Barrett at Howth, Co. Dublin, in August 1860 and the first record from Great Britain appears to have been from Torquay in 1864. Since those times, this species has become known as a speciality of the Channel Islands and of south-western coasts from Devon north-westwards to Anglesey. There are also records from the Wye Valley and from Kent.

In 2006, Ian Masters exhibited at the Annual Exhibition of the British Entomological & Natural History Society (BENHS), at Imperial College, a specimen of this species that he had taken at 40 watt actinic light in his garden in Owlsmoor, Sandhurst, Berkshire (O. S. grid reference SU 851624). He recorded one on the night of 24 July, a new vice-county record, one on the night of 25 July and two on the night of 26 July. I was fortunate enough to record this species in my own garden in Wokingham Without, (SU 832656), using 125 watt MV, during 2007, a year that brought further Berkshire records. These follow in date order: 5 August - 1 (Ian Masters, exhibited at the BENHS Exhibition, 2007), 23 September - 1 (RH, exhibited at the BENHS exhibition, 2007), 7 October - 1 (RH) and 8 October - 1 (RH). At that stage evidence of possible local residence was not conclusive.

Hopes locally were high for 2008 and were well-rewarded by the capture of twenty specimens from the same area, some taken by Steven Hancock at Little Sandhurst (SU 827622) using 125W MV. The 2008 Berkshire records are: 23 May - 2 (SH), 6 June - 2 (Steven Hancock), 26 June - 1 (Ian Masters), 1 July - 3 (Ian Masters), 2 July - 1 (Ian Masters), 4 July - 2 (Ian Masters) and 1 (RH), 10 July - 1 (Ian Masters), 26 July - 1 (RH), 30 July - 1 (RH), 7 August - 1 (RH), 20 August - 1 (RH), 24 August - 1 (RH), 9 October - 1 (RH), 12 October - 1 (RH). The Berkshire records are either by personal communication or as supplied by the county recorder, Martin Harvey. With regard to geology, the three Berkshire areas are on what Baker (1994. *The Butterflies and Moths of Berkshire*. Hedera Press) describes as 'Sands'.

The county recorders for the three vice-counties bordering south-east Berkshire, Martin Albertini in Buckinghamshire, Tim Norris in Hampshire and Graham Collins in Surrey, have very kindly supplied relevant records for *E. caniola* from their areas. I had originally suspected that *E. caniola* had leap-frogged to this area from the South West, but the data from Hampshire and Surrey

suggest that this species may instead have reached Berkshire from the south or east. Whatever the route, it is clear that *E. caniola* has become widespread in central southern England. There may indeed be a wider picture for someone to investigate.

For Hampshire & the Isle of Wight there are, up to the end of 2008, six singleton records of *E. caniola* going back as far as 1992 for VC 10 (Isle of Wight) and seven scattered singleton records going back to 1993 for VC 11. The VC 10 records are from the Freshwater and Bonchurch areas and suggest the possibility of resident populations. Vice-county 12 has produced 27 records from 2003 onwards. One 2008 record is from Kempshot, just south of Basingstoke, but the remainder are from the Farnborough area, 15 in June 2005. According to Goater (1974. *The Butterflies and Moths of Hampshire and the Isle of Wight*. Classey), Farnborough is on Bagshot Sand and is not far from the cluster of Berkshire records.

Eilema caniola first appeared in Surrey (VC 17) in 2001 and then appeared again at South Croydon in 2005. It had become very common by 2007/2008, Graham Collins finding that ‘... trap numbers were higher than either *lurideola* or *complana*’. It has been recorded from ten 10-kilometre squares in Surrey, including being found as larvae. The general pattern of records appears to follow a line east-north-east from the Haslemere area, mainly coinciding with the underlying Lower Greensand (Collins, 1997. *Larger Moths of Surrey*. Surrey Wildlife Trust). This may be significant since, although further from the Berkshire sites than the VC 12 records, the Hampshire and Berkshire records are also from sandy soil.

Only a single record from Buckinghamshire has been reported up to the end of 2008. This was from Chorleywood, where Richard Ellis caught one at MV on 11 September (*Antea*, 39-42). The location is remote from any of the other sites considered here, and may indicate either the presence of an as yet undiscovered cluster or a stray or migrant.

There were fears locally that the unusually-cold winter of 2008/2009, and especially February’s unusually heavy snowfall, may have affected the status of *E. caniola* in southeast Berkshire, but early 2009 impressions are that its position here is stronger than ever.— ROGER HAYWARD, The Corner House, Nine Mile Ride, Wokingham, Berkshire RG40 3DY.

EDITORIAL COMMENT: Richard Ellis’s garden at Chorleywood is adjacent to Chorleywood Common, which rests on River Terrace Gravels (see British Geological Survey Drift Geology map reproduced in Plant, 2008. *The Moths of Hertfordshire*. Herts Natural History Society). The geology relating to the Buckinghamshire record is, therefore, broadly in keeping with that at the other localities defined above by Roger Hayward.

Short contribution on the macrolepidoptera fauna of the Republic of Montenegro (Crna Gora, Balkan Peninsula) (Lep.: Geometridae, Noctuidae) with a report of two new genera and four new species for the country

The fauna of the Republic of Montenegro (Crna Gora), is without any doubt very rich and interesting, because of both the geographical position of the country and its physical geography. The nocturnal Lepidoptera fauna of Montenegro is, however, very poorly explored and finding a new species for the country is still very easy. There is a distinct lack of native lepidopterists; the bulk of the minimal recording effort undertaken to date has been carried out by visitors from the other Republics of the former Yugoslavia.

In 2002 I collected in the Bjelasitza Mountains at Biogradska Gora National Park (Beshkov, S. 2004: New Data of the fauna of the Macrolepidoptera from Biogradska Gora National Park, Montenegro (Insecta: Lepidoptera) In: *Biodiversity of the Biogradska Gora National Park, No 1, Podgorica*, 126-139) and at high altitude in Durmotor National Park. Because of bad weather results from Durmitor were very poor. In May 2004, I collected in the Rumija Mountains, situated between Skodra (Shkadersko) Ezero Lake (Plate 40) and the Adriatic Sea; for several nights I also collected near the sea. The new and more interesting data are present below. Three genera and six species are reported here as new for Montenegro.

Geometridae

Gerinia honoraria ([Denis & Schiffermüller, [1775]])

Above Adriatic Sea Coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004, limestone area with maquis, 1 male and 2 females. The genus *Gerinia* is split from *Campaea* by Leraut, P. 2009 (Moths of Europe, Vol. II: Geometrid moths, N.A.P. Editions, 806pp.). New genus and a new species for Montenegro.

Noctuidae

Nola chlamitulalis (Hübner, [1813])

Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m., N42°10'36.5"; E019°11'13", 07-11.v.2004, limestone area with mixed Quercus forest arround. Reported as a new for Serbia (and for former Yugoslavia as well) from Brestovacka Banja, E. Serbia very recently (Stojanovic, D., 2002: The first finding of species *Nola chlamitulalis* Hübner, 1813 (Lepidoptera: Nolidae) in Serbia. *Acta entomologica serbica* 7(1/2): 163-166). New species for Montenegro, perhaps overlooked by the other lepidopterologists before.

Zebeeba falsalis (Herrich-Schäfer, 1839)

Above Adriatic Sea Coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004, limestone area with maquis. Reported as a new for Montenegro from the Bay of Kotor very recently (Stojanovic, D. & M. Glavendekic, 2003: Five species of Noctuidae

(Lepidoptera) new for the fauna of Serbia and Montenegro. *Acta entomologica serbica* 8(1/2): 85-90). This is the second report of *Zebeeba falsalis* for Montenegro.

Lygephila procax (Hübner, [1813]) (=*limosa* Treitschke, 1826)

Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m., N42°10'36.5"; E019°11'13", 11.v.2004, limestone area with mixed *Quercus* forest around. Published as a new for Montenegro from Durmitor National Park (S. Beshkov, *Antea*: 243-248). This is the second locality of *L. procax* in Montenegro.

Tathorhynchus exsiccata (Lederer, 1855)

Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m., N42°10'36.5"; E019°11'13", 07-11.v.2004, limestone area with mixed *Quercus* forest around, 1 male; Above Adriatic Sea coast, Misici village between Bar and Petrovac, 100m, 13.v.2004, limestone area with maquis, 1 male (Plate 41, Fig. 1); Above Adriatic Sea coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E 019°09'02", 12.v.2004, limestone area with maquis, 1 male. New genus and a new species for Montenegro.

Ophiusa tirhaca (Cramer, 1777)

Above Adriatic Sea coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004, limestone area with maquis. Reported as a new for Montenegro from the Bay of Kotor very recently (Stojanovic, D. & M. Glavendekic, 2003: *op. cit.* This is the second locality of *L. procax* in Montenegro.

Amephana dalmatica (Rebel, 1919)

Above Adriatic Sea coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004, limestone area with maquis, 4 males (Plate 41, Fig. 2.). New genus and a new species for Montenegro.

Apamea syriaca Osthelder, 1933

Above Adriatic Sea coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004, limestone area with maquis, 2 males. Published as a new for Montenegro from Durmitor National Park (S. Beshkov, *Antea*: 243-248). This is the second locality of *A. syriaca* in Montenegro.

Hadena adriana (Schawerda, 1921)

Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m., N42°10'36.5"; E019°11'13", 07 – 11.v.2004, limestone area with mixed *Quercus* forest, 10 males (Plate 41, Fig. 3) and 1 female (Plate 41, Fig. 4). Carnelutti, J. & S. Michieli (1958: I. Beitrag zur Lepidopterenfauna der Crna Gora. – *Fragmenta Balcanica II* 10(44): 67-79) report *Hadena armeriae* (Guenée. 1852) for Montenegro, but this might relate to either *Hadena adriana* or *H. compta armeriae*. The latter is the eastern European subspecies of *H. compta* (Hacker, H.

1996: Revision der Gattung *Hadena* Schrank, 1802 (Lepidoptera: Noctuidae). – *Esperiana* **5**: 7-697; Hacker, H., L. Ronkay & M. Hreblay 2002. Hadeninae I. – *Noctuidae Europeae*, vol. 4. Entomological Press) and is probably the true identity of the reported specimen. Support for this is also found in the flight period – *H. adriana* is on the wing in April-May (Hacker, Ronkay & Hreblay, *op. cit.*), while the Cornelutti record is from the first third of July. *H. adriana* is also mentioned for Montenegro in Hacker (*op. cit.*), but without any data. For these reasons, I now report *H. adriana* as a new for Montenegro.

Epipsilia cervantes vargai Fibiger, 1993 (= *E. c. gyulaipetri* Varga, 1975, nomen nudum)

Durmitor Mts, Curevac above Tara Canyon and Tepca Village, 1530m, 29.viii.2002; 2 males; Durmitor, Sharban camping, ~4 km W of Sedlo Pass, Zhablyak area, 1700m, 2.viii.2002, 1 female; Durmitor, Sedlo Pass, Zhablyak area, 1900m, 30.viii. – 1.viii.2002, 7 males and 1 female. Reported as a new for Montenegro from Biogradska Gora National Park (Beshkov, S. 2004: New Data of the fauna of the Macrolepidoptera from Biogradska Gora National Park, Montenegro (Insecta: Lepidoptera) In: *Biodiversity of the Biogradska Gora National Park, No 1, Podgorica* 126-139). It is possible that some of the previous reports for other *Epipsilia* species represent misidentification of this taxon.

Noctua interposita (Hübner, 1790)

Durmitor Mts, Curevac above Tara Canyon and Tepca village, 1530m, 29.vii.2002, 1 specimen; Durmitor Mts, Sedlo Pass, Zhablyak area, 1900m, 30.vii.2002, 1 female. It is likely that *N. interposita* has not been reported for Montenegro before now because of confusion with *N. orbona*. New species for Montenegro.— STOYAN BESHKOV, National Museum of Natural History, 1 Tsar Osvoboditel Blvd, 1000 Sofia, Bulgaria (Email: stoyan.beshkov@gmail.com).



Plate 40. The church at Shkadersko Ezero Lake near Duravci village, 350 metres a.s.l.

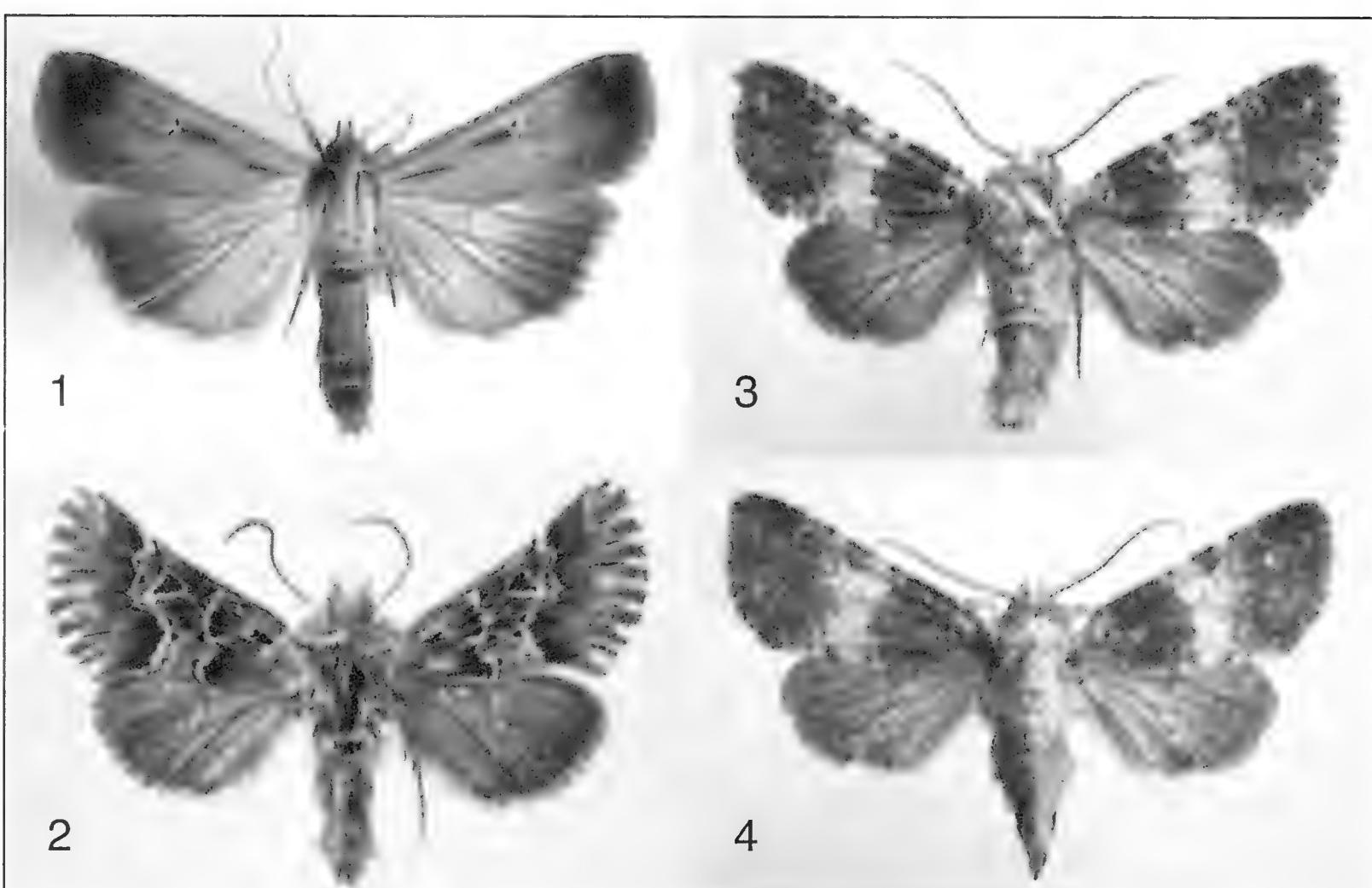


Plate 41: **Figure 1.** *Tathorhynchus exsiccata* (Lederer, 1855), male. Misici village between Bar and Petrovac, 100m, 13.v.2004. **Figure 2.** *Amephana dalmatica* (Rebel, 1919), male. Adriatic Sea coast between Ulcinj and Valandos, 6 km NW from Ulcinj, 180m., N41°58'18"; E019°09'02", 12.v.2004. **Figure 3.** *Hadena adriana* (Schawerda, 1921), male. Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m, N42°10'36.5"; E019°11'13", 07-11.v.2004. **Figure 4.** *Hadena adriana* (Schawerda, 1921), female. Rumija Mts, Shkadersko Ezero Lake, near Duravci village, the church, 350m., N42°10'36.5"; E019°11'13", 07-11.v.2004.

Possible dispersal flight of *Mesoligia furuncula* [D.&S.] (Lep.: Noctuidae) and other species

The Cloaked Minor *Mesoligia furuncula* is a common moth in my garden, which is situated in a suburban area of north-west Kent. During the main flight period of this species daily numbers are modest, rarely exceeding ten individuals and mirroring the general abundance of moths in the trap. On the night of 31 July 2009, at least 56 individuals were attracted to light and counted the next morning. The night was otherwise unexceptional with a minimum temperature of 14°C. The previous four nights had produced 1, 7, 0 and 1 *furuncula* respectively, and subsequent nights 2, 3, 13 and 7 individuals.

The assumption was that this was a dispersal flight rather than the result of successful local breeding, as the latter would have produced a more sustained increase in numbers. I was rather disappointed that, on seeking further information on dispersal from the literature, very little seemed to have been published. It is true that there have been many reports over the years of sudden increases in the numbers of non-resident species such as *Autographa gamma* L. (Noctuidae) and *Nomophila noctuella* [D.&S.] (Pyralidae), made no doubt in the healthy anticipation of more exciting species appearing in the trap. However data on resident species is distinctly thin on the ground, and largely confined to reports of 'vagrants' or 'wanderers'. Whilst these vagrants are in all probability part of a dispersal strategy for a species, a coordinated dispersal of individuals is far more interesting – but would it be noticed? Those regularly operating a static trap would certainly notice an influx of a new species, but would a transient spike in the numbers of an already resident species be noticed or recorded?

Trap operators will often note, and more often ignore, a sudden influx of small beetles or corixid bugs, but will usually note an influx of *Acentria ephemerella* ([D.&S.]) (Lep.: Pyralidae) which is well known for its dispersal flights, and on many occasions I have noted elevated numbers of this species appearing in the trap, often in the first hour or two after dusk. On 14 July 2008, several thousand individuals appeared at a light trap running in a chalk meadow in Kent, with no known local ponds or other bodies of water. Such were the numbers that handfuls of these tiny moths could be scooped from the sheet.

One species whose geographic spread has been well documented is the Horse Chestnut leaf miner *Cameraria ohridella* (Deschka & Dimic) (Gracillariidae). This species is depressingly abundant in north-west Kent, although I have not noted any very local infested trees and *ohridella* is normally an infrequent visitor to the trap. On night of 26 July 2007, an overcast, humid night with minimum temperature 17°C, an estimated 500+ individuals of *ohridella* were trapped. There were no exceptional numbers of any other species. Elevated numbers of *ohridella* persisted for several nights, but never exceeding 20 individuals in any one night.

It remains unclear whether or not co-ordinated dispersal flights of our native species is a regular phenomenon. Perhaps where numbers are not spectacularly large, the events go unnoticed and certainly unrecorded.— PAUL SOKOLOFF, 4 Steep Close, Orpington, Kent BR6 6DS (Email: paul.sokoloff@ntlworld.com).

EDITORIAL COMMENT

Paul's suggestion that any coordinated dispersal of resident moths would probably go un-noticed may or may not be entirely true. A growing number of moth enthusiasts these days do count the moths in their garden traps each morning and record them in computerized databases, perhaps representing the modern influx of 'birders' into moth circles. However, I would think that any *transient spikes* so recorded do probably go un-reported and un-interpreted – and therefore Paul's fears are not without foundation. Hopefully, all this numerical data will not be lost if people submit their MapMate files and other lists to their county recorders each year and if these recorders duly forward the validated data to the new National Macro Moth Recording Scheme. With luck and appropriate funding perhaps we might see that data analysed in due course? In the meantime, I see that whilst 31 July 2009 was unremarkable here in Hertfordshire, 14 July 2008 produced a male Brown-tail *Euproctis chrysorrhoea*. This is not a local breeder and this record most certainly reflects dispersal. It would be extremely interesting to hear from readers across the country whether or not they detected any potential dispersal on these two dates of 14 July 2008 and 31 July 2009 (and perhaps also one day either side). — COLIN W. PLANT.

Second brood Peacock butterflies *Inachis io* (L.) (Lep.: Nymphalidae) during 2009

A good number of Peacocks emerged from hibernation in March 2009 at Stanwell Moor, near Staines, in Middlesex (VC 21). The next generation appeared as expected during mid July, also in good numbers, with more than a dozen seen on the same patch of thistles on 16 July. With the indifferent July weather, they then disappeared and failed to reappear when the sun returned in August.

According to Asher et al (2001. *The Millennium Atlas of Butterflies in Britain and Ireland*) Peacock butterflies are generally considered to have one generation each year and so it was with some surprise (and against a background of various unsubstantiated reports of early hibernation in other parts of the country), that I found caterpillars of this butterfly at the same site in August, with a larval 'nest' on 17 August and three more within 50 metres of the first on 18 August. I collected the first nest and one of the second three for study. The larvae pupated between 21 and 25 August; parasitic flies (Diptera: Tachinidae) emerged from the pupae from 29 to 31 August; adult butterflies emerged from 5 to 12 September.

A total of 290 butterflies emerged successfully and approximately 40 succumbed to the dipteran parasite. Another twenty or so succumbed to various accidents and unexplained deaths at the larval stage. Only two pupae, apparently unaffected by the parasite, failed to produce adults. Overall, the butterflies were smaller than usual, many no larger than a Small Tortoiseshell *Aglais urticae* (L.).

Unfortunately, one or two butterflies found themselves in spider webs rather quickly, and one was viciously set upon by a wasp. Hazards of a late emergence - the garden spiders are very large and hungry in September! — DAVE MILLER, 49 Benen-Stock Road, Stanwell Moor, Staines, Middlesex TW19 6AN.

Phyllocnistis ramulicola* Langmaid & Corley (Lep.: Gracillariidae) feeding on aspen, *Populus tremula

At Havant Thicket, Hampshire, the type locality of *Phyllocnistis ramulicola*, the species was again found in huge abundance as mines and cocoons during September 2009; for the first time since its discovery in 2006, mines were also found in the stems of Aspen *Populus tremula* suckers. What was rather curious was the fact that the cocoons were on the underside of the leaves, whereas on *Salix* species they are invariably on the upperside. I collected several leaves with cocoons, and moths duly emerged over the ensuing ten days. I think it probable that this was an overspill phenomenon because the *Salix* plants in the vicinity were so heavily infested by the moth – to the extent that hardly any healthy stem was visible in some plants due to a coalescence of mines and with each leaf containing at least two cocoons. This brings the number of foodplants attacked by the species to seven: *Salix cinerea*, *S. caprea*, *S. aurita*, *S. alba*, *S. fragilis*, *S. viminalis* and now *Populus tremula*.— JOHN R. LANGMAID, Wilverley, 1 Dorrita Close, Southsea, Hampshire, PO4 0NY (Email: johnlangmaid@btinternet.com).



Devon Carpet *Lampropteryx otregiata* (Metcalfe) (Lep.: Geometridae) – a moth new to Suffolk in 2009

The Suffolk Moth group arranged a visit to Dunwich Forest on the night of the 31 July 2009. This was one of several planned recording sessions at the site during the year, with the principal aim of carrying out survey work prior to changes in management from forestry to more natural woodland. The target for this night was to try and cover the part of the forest that met with the reed-beds to the south of Walberswick, looking for the White-Mantled Wainscot *Archana neurica* (Hb.) (Noctuidae).

Five recorders were present: Matthew Deans, Keith Knights and Neil Sherman from Suffolk as well as John Chainey and Jenny Spence from Hertfordshire. At the site, the habitats consisted of areas of Scots Pine *Pinus sylvestris* plantation, Oak *Quercus*/Birch *Betula* woodland, Reed-bed (*Phragmites*) and damp fen. Five 125 watt MV (Mercury vapour) light traps were deployed, as well as a 125 watt MV bulb placed over a white sheet. Some lights were placed close to the reed-bed edge with the others on a track through the forest. Conditions looked very good, with cloud cover for the first part of the night and temperatures in the high teens.

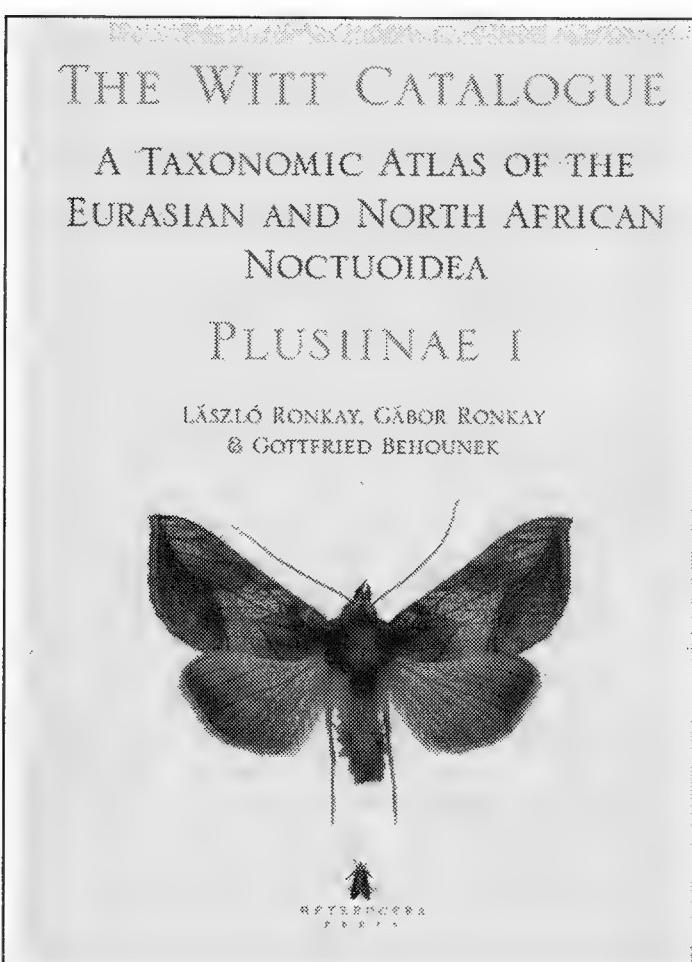
It was decided to check the traps after about one hour to see what had been attracted. On the first trap round, a small larentine moth was boxed up by Jenny at one of their lights and passed to John to identify. When the group met up, the moth was passed round and identified as Devon Carpet *Lampropteryx otregiata*, a moth that was completely unexpected. This prompted the discussion of its origins. As the specimen was quite badly damaged, the possibility that it had been imported was put forward. John and Jenny had trapped a few days previously in the New Forest, Hampshire and the Portland area of Dorset, both areas where the moth occurs. This was thought to be improbable as their equipment had been stored in a car for a few days and the weather had been warm so any moths left by accident in the traps would surely have died. Due to the uncertainty of where the moth had come from it was decided not to claim the moth as a new species to the county at that point. Fortune was with the group, however, as another specimen was captured shortly afterwards in one of the traps placed on the edge of the reed-bed, this time in much better condition, confirming the initial identification. This trap was surrounded by Marsh Bedstraw *Galium palustre*, the expected food-plant of the moth and there were also more good stands of the plant in close proximity. No more Devon Carpet appeared at light that night, which was not that unexpected as John had informed us the moth generally flies at dusk and just afterwards. Both specimens of the moth were retained, the first one by John and the second by Neil Sherman. The better specimen was photographed the next day and shown to the Suffolk County recorder, Tony Prichard, who also confirmed our identification. We also recorded three specimens of the target moth for the night, the White-Mantled Wainscot, these being somewhat overshadowed by the Devon Carpet captures.

At the moment, the origins of the moths are uncertain. They could have been migrants or wanderers, but conditions around the time of the sightings were not conducive to migration, with the Silver Y *Autographa gamma* the only known migrant trapped on the same night. Could it be an overlooked resident species? Possibly, but the Walberswick reed-beds have been well recorded in the past and in modern times and there have been no reported sightings of this moth. Another alternative is that it could be a recent colonist. Discussions with other moth recorders around the UK about the sighting turned up some relevant information on this. Apparently the moth has been found away from its usual known haunts in the west of Britain at sites in the Midlands in recent years, so the jump to Suffolk is not as far as first thought. Unfortunately, this new information is apparently unpublished at present. It is quite possible that the moth could be resident in the area, with stands of the food-plant close to the trapping site. More survey work will take place in 2010 to try and prove this.

Thanks must go to John Chainey for information on the moth including its flight-time and life history and to Tony Prichard and Matthew Deans for their help and comments on producing this article.— NEIL SHERMAN, 2 Golf Cottages, Bucklesham Road, Ipswich, Suffolk IP3 8UG (E-mail: neil_sherman@fsmail.net).

BOOK REVIEWS

The Witt Catalogue. A taxonomic atlas of the Eurasian and North African Noctuoidea. Plusiinae I. by László Ronkay, Gábor Ronkay & Gottfried Behounek. 348 pp., 290 x 212 mm, hardbound, ISBN: 978 963 88014 0 1. Heterocera Press, Szent István krt. 4, H-1137, Budapest, Hungary, 2009. €120 (10% discount for subscribers to the series).



This is the first volume in a series, named after the Editor-in-Chief, Thomas Witt, that aims to cover the entire noctuoid fauna of Eurasia and North Africa. The work will cover families Notodontidae, Arctiidae (*sensu lato*) and Lymantriidae as well as the Noctuidae, Nolidae, Erebidae, Micronoctuidae etc. Furthermore, rather than merely documenting existing taxa, the authors have determined to present in this work a thorough taxonomic revision of the entire Noctuoidea. This monumental task is surely likely to be beyond the abilities of most authors, but I have no doubt that given long and healthy lives these particular authors will achieve what they describe in the Preface as 'the accomplishment of an old dream'.

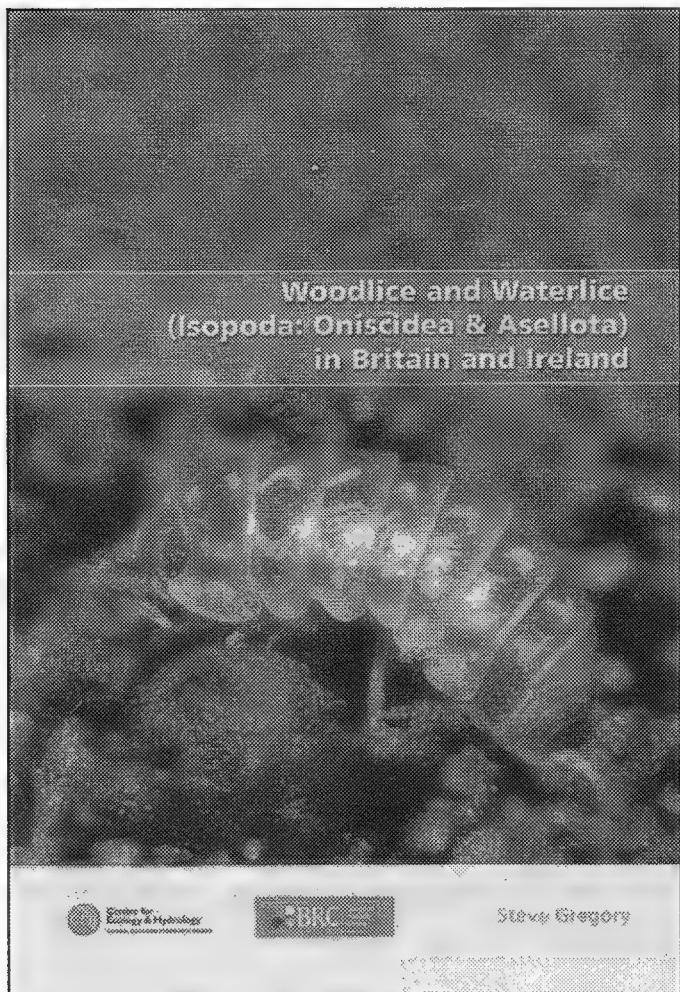
The general layout of the entry for each species clarifies the taxonomic background and presents a full synonymy as well as giving

giving diagnostic features for identification. General distribution is also presented, but only as text (there are no distribution maps), which may annoy some readers – it is so much easier to gain an instant impression of distribution pictorially rather than by having the read text – even if the latter is, as here, positioned in a separate paragraph. Genitalia are illustrated for both sexes. Taxonomic revisions include two new genera, seven new species (two in *Diachryssia* and five in *Euchalcia*), three new subgenera, two taxa raised to subspecific status, one more demoted to sub-specific status, ten new synonyms and five new combinations. There are also twenty new Lectotype designations.

Several species covered in this volume affect the British Isles, the most significant, perhaps, being *Diachryssia stenochrysis* (Warren, 1913) which appears to have been steadfastly ignored by some elements of the UK entomological community. It probably affects most of the country, but can be difficult to separate from the familiar *D. chrysitis* (L.).

Linguistic input to this volume has been provided by Messrs Barry Goater, Martin Honey and Kauri Mikkola. And I should mention, finally, that the cover has been designed by Annamária Tiska – a promising young artist whose design abilities are surpassed only by her skill in making delicious chocolate cakes with which to distract visiting English lepidopterists from her partner's impressive noctuid collection!

Woodlice and Waterlice (Isopoda: Oniscoidea and Asellota) in Britain and Ireland by Steve Gregory (with photographs by Paul Richards, Dick Jones and Theodoor Heijerman). 176 pp., 250 x 175 mm, paperback, ISBN: 978 0 9557672 8 9. FSC Publications, 2009. Available from the publisher at Preston Montford Lane, Shrewbury, SY4 1DU. £19.50 inclusive of postage.



I was surprised to discover that the previous woodlouse distribution atlas, authored by Paul Harding and Stephen Sutton was actually published as long ago as 1985 and so is now almost 25 years old. That original work was a landmark publication in the field of isopodology; unsurprisingly, however, with the benefit of the results of a further 25 years of research, this new work provides a significant advancement of our knowledge of this somewhat neglected group of invertebrates.

Examination of the checklist shows that no less than seven new species have been added to the British Isles fauna in those intervening years although of these, two are known only inside glasshouses. After the introductory chapters, which include an interesting history of woodlouse recording in Britain, the species accounts follow – each illustrated with a full-page distribution map

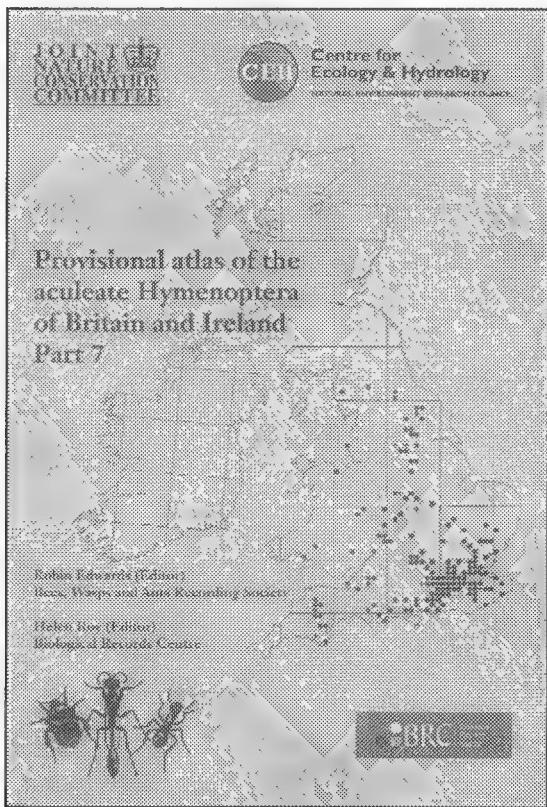
and most with a half page colour photograph. I confess that I had not realized that the humble woodlouse was quite so attractive!

In keeping with other invertebrate groups, several members of the Isopoda are rare and/or threatened, but it is both surprising and worrying to see that of the 40 outdoor species listed

for Great Britain no less than 17 attract a conservation status of Nationally Scarce or higher; this is a very high percentage for any group. It is clear that there is much to learn about woodlice and waterlice in Britain – all we need now is an update to Steve Hopkin's 1991 identification keys and people might be able to take a more active role.

ALSO RECEIVED ...

Provisional Atlas of the aculeate Hymenoptera of Britain and Ireland, Part 7
edited by **Robin Edwards and Helen Roy**. 146 pp., A5, softback, ISBN: 978 1 906698 14 0. Published by FSC Publications, 2009. Available from FSC Publications, Preston Montford Lane, Shrewbury, SY4 1DU. £8, inclusive of postage.



Number 7 in this series presents us with a welcome and useful tranche of distribution maps, with accompanying text, for a selection of 58 species of British bees, wasps and ants. Unfortunately, the selection of species for inclusion seems fairly random, as has been the case for the previous six volumes. Whilst targeting individual species for inclusion in the next volume may be an effective way of gathering enough data to make the maps worthwhile, the end product is an incomplete selection of species distribution maps and, since Part 1 was published in 1997, most are now out of date and thus unreliable as a source of valid data. For those actively working on aculeate Hymenoptera this is an invaluable series; the rest of us would be better off saving our money in the hope that, in due course, a single tome updating all the maps will become available.

ADDENDA ET CORRIGENDA

Corrections to the current volume (121)

Page 198: We are informed that in the Note concerning *Trifurcula squamatella* by Higgott, Clifton & Goddard the caption for Figure 1 is incorrect since it refers to a different specimen. The corrected caption should read '**Figure 1:** Male genitalia of *Trifurcula squamatella* Stt. Rushmere St. Andrew, 4.viii.2008. J. B. Higgott (gen. prep. & photo. J. B. Higgott)'.

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THE MICHAEL MAJERUS FUND

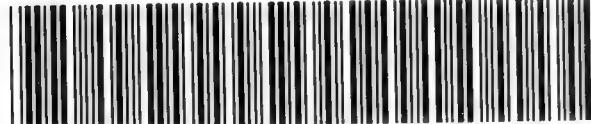
A new Grant Scheme will be launched by the Amateur Entomologists' Society (AES) at its Members' Day on 24 April 2010. The Grant is named in memory of the late Professor Mike Majerus, AES President 2005-2009, whose effort and vitality in promoting the AES and encouraging young entomologists is formally acknowledged in the new Grant Scheme.

The purpose of the Grant is to encourage active involvement in entomology and to engage a new generation of entomologists. It will support new projects which aim to advance amateur entomological study, research or education. It is anticipated that in most cases these projects will be based in the British Isles; projects involving the promotion of entomology amongst the young will be viewed particularly favourably. Further details will also become available over the coming months on the AES website at www.amentsoc.org.

For a project to be eligible for a grant from the Mike Majerus Fund, it must represent new activity; Money will not normally be awarded for costs already incurred. Anyone may apply; non-members of the AES will, of course, be encouraged to join. Members of the AES Council are eligible to apply provided that the project is, demonstrably, not in any way related to their work as Trustees of the AES. Applications, which must be in writing, will be accepted at any time of the year and will normally be considered by the AES Grants Panel and recommendations made to the AES Council at the quarterly meeting immediately following receipt of the application. Applicants will be offered part, all or none of the amount requested, or a suitable alternative award, as appropriate. Awards may be conditional on, for example, the submission of a report on the project for which the grant is awarded; any conditions will be determined by Council in each individual case. It is intended that the first grant from the fund will be awarded during June 2010.

The AES Council's decision will be final and will normally be notified to the applicant within two weeks of the meeting at which the application is considered. Payment of the award will be made at the earliest suitable opportunity, subject to any conditions that Council may stipulate.

Initial funding of this Grant is with money donated in memory of Mike Majerus. As with all AES funds, public donations, directly or via legacies, are always welcome. Individuals and organisations wishing to donate to the Michael Majerus Fund are invited to contact the Treasurer of the Society in the first instance — AES Treasurer, PO Box 8774, London SW7 5ZG (e-mail: treasurer@amentsoc.org).



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